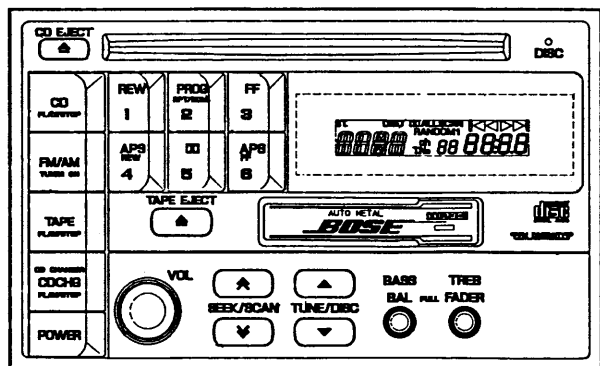


clarion Service Manual

Published by Service Information Section



NISSAN Automobile Genuine AM/FM Cassette Stereo CD Deck

Model **PN-2083D**

(Genuine No. 28188 60U10)
(ID No. CN503)

Model **PP-2083I**

(Genuine No. 28188 18Y00)
(ID No. CN513)

SPECIFICATIONS:

[RADIO SECTION]

Circuit system: Superheterodyne
Tuning system: Electronic tuning
Receive range: AM 530kHz to 1,710kHz
FM 87.75MHz to 107.9MHz
Intermediate frequency: AM 450kHz
FM 10.7MHz
Quieting sensitivity: AM Less than 32dB
(at 20dB S/N)
FM Less than 11dB
(at 30dB S/N)
Separation: FM More than 20dB
Auto tuning stop sensitivity:
AM 32 ± 6dB
FM 25 ± 6dB

[TAPE SECTION]

Reproduction system: 4 track, 2 channel, stereo
cassette deck
Tape speed: 4.76cm/sec. (1-7/8"/sec.)
Wow & flutter: Less than 0.15% (W.R.M.S.)
Separation: More than 35dB
Crosstalk: More than 45dB
S/N ratio: Normal tape (120μs)
45dB/55dB (DOLBY ON)
METAL tape (70μs)
47dB/57dB (DOLBY ON)
FF, REW time: Less than 110sec. (C-60)

[CD SECTION]

Disc: 12cm/8cm

Separation: More than 40dB (30kHz LPF)
S/N ratio: More than 80dB
Distortion: Less than 0.2%
Frequency characteristics: 0 ± 3dB (17Hz to 20kHz)

[SYNTHESIS]

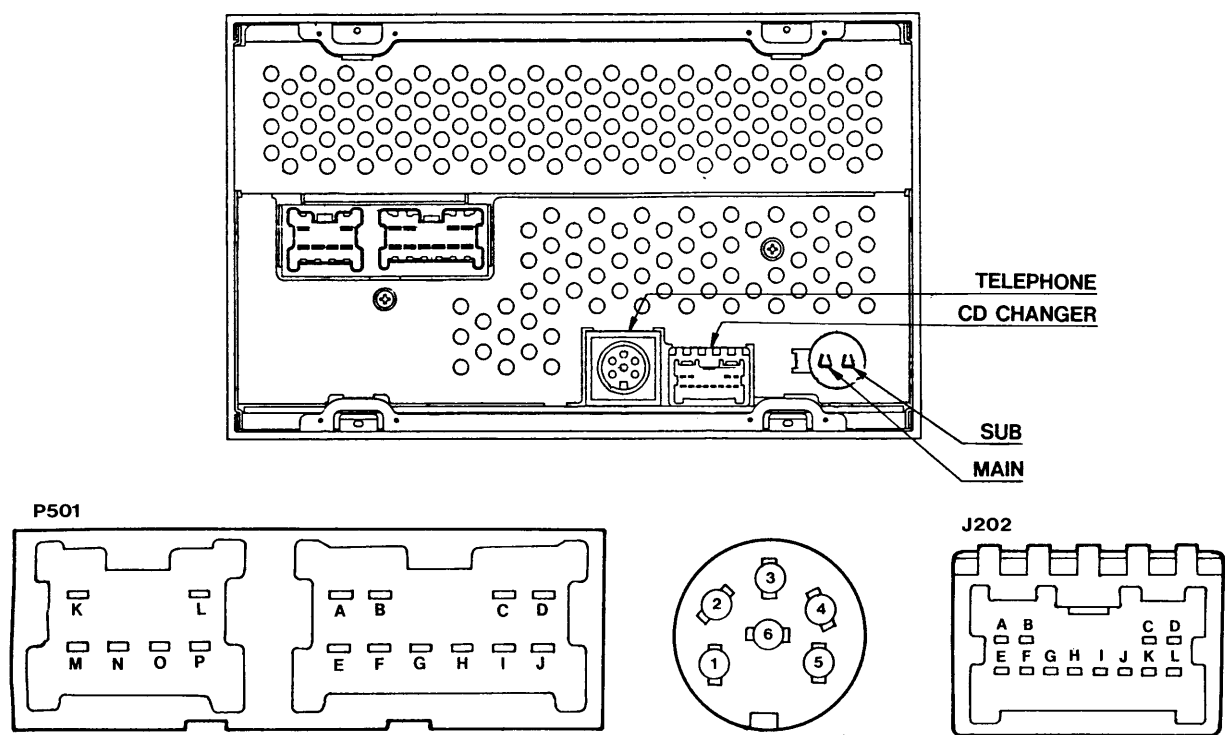
Load impedance: 300Ω × 4
Output level: AM 1.1 ± 0.5V
(at VOL. max.)
FM 0.75^{+0.5}_{-0.3}V (at VOL. max.)
TAPE 2.4^{+1.0}_{-0.7}V (at VOL. max.)
CD 6^{+0.5}_{-1.5}V (at VOL. max.)
AUX 6^{+0.5}_{-1.5}V (at VOL. max.)
Power supply voltage: DC 14.4V Negative ground
Current consumption: Less than 3A
(at max. output)
Dimensions: Width 180mm
Height 108mm
Depth 160mm
Weight: 2.4kg

• Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
• "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

COMPONENT:

• PN-2083D-A/PP-2083I-A
Main unit

■REAR VIEW & CONNECTORS:



A	FRONT LEFT (+) OUTPUT
B	FRONT RIGHT (+) OUTPUT
C	ILLUMINATION
D	Acc
E	FRONT LEFT (-) OUTPUT
F	FRONT RIGHT (-) OUTPUT
G	ANTENNA SIGNAL
H	BACK UP
I	ILLUMI. CONTROL
J	GND
K	REAR AMP. TURN-ON SIGNAL
L	REAR RIGHT (+) OUTPUT
M	GND
N	REAR LEFT (-) OUTPUT
O	REAR LEFT (+) OUTPUT
P	REAR RIGHT (-) OUTPUT

1	TEL-ON SIGNAL INPUT
2	Rch INPUT (+)
3	
4	GND
5	Rch INPUT (-)
6	

A	Lch INPUT (+)
B	Rch INPUT (+)
C	COMBI→CD (TXD)
D	COMBI-ON SIGNAL OUTPUT
E	Lch INPUT (-)
F	Rch INPUT (-)
G	GND
H	GND
I	
J	SLAVE-IC REQUEST
K	CD→COMBI (RXD)
L	AUX-ON SIGNAL INPUT

■ OPERATION MODE CHART:

[illegible]

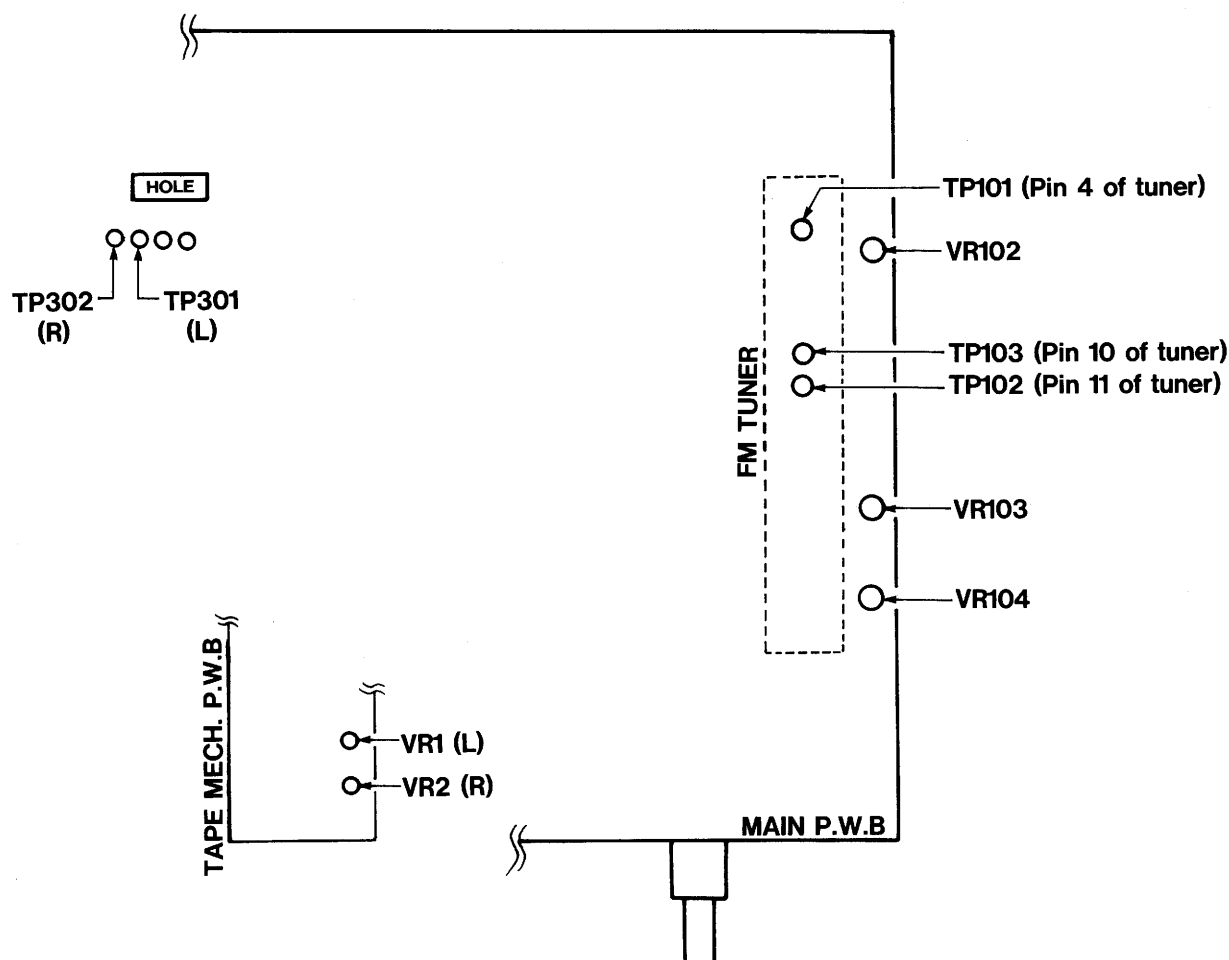
NOTE) NO SITUATION

NO CHANGE

- *1) PRESET KEY DEPRESS FOR LESS THAN 1.5S → MEMORY READ
 MORE THAN 1.5S → MEMORY WRITE
 *2) DETECT TAPE TOP.REW → STOP
 DETECT TAPE END.FF → STOP
 *3) DETECT APS.REW APS.FF APS → STOP
 DETECT TAPE TOP.REW APS → STOP
 DETECT TAPE END.FF APS → STOP
 *4) DETECT FIRST MUSIC → PLAY
 *5) DETECT PRESENT MUSIC → PLAY
 *6) DETECT FINAL MUSIC → PLAY FIRST MUSIC
 *7) DETECT MUSIC END → PLAY MUSIC TOP
 *8) CD NO DISC → AFTER 5SEC → ALL OFF
 *9) DETECT MUSIC END → PLAY RANDOM MUSIC
 *10) RANDOM MODE OFF → ALL DISC REPEAT MODE

■ADJUSTMENT:

●ADJUSTMENT POINT



Switching of diversity

- How to fix the MAIN channel
While holding the buttons of CH1 and CH3, turn on the RADIO SW.
- How to fix the SUB channel
While holding the buttons of CH4 and CH6, turn on the RADIO SW.
- To release the MAIN or SUB channel, turn off the RADIO SW.

●FM SECTION

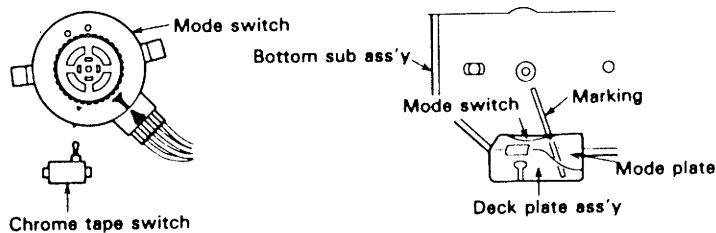
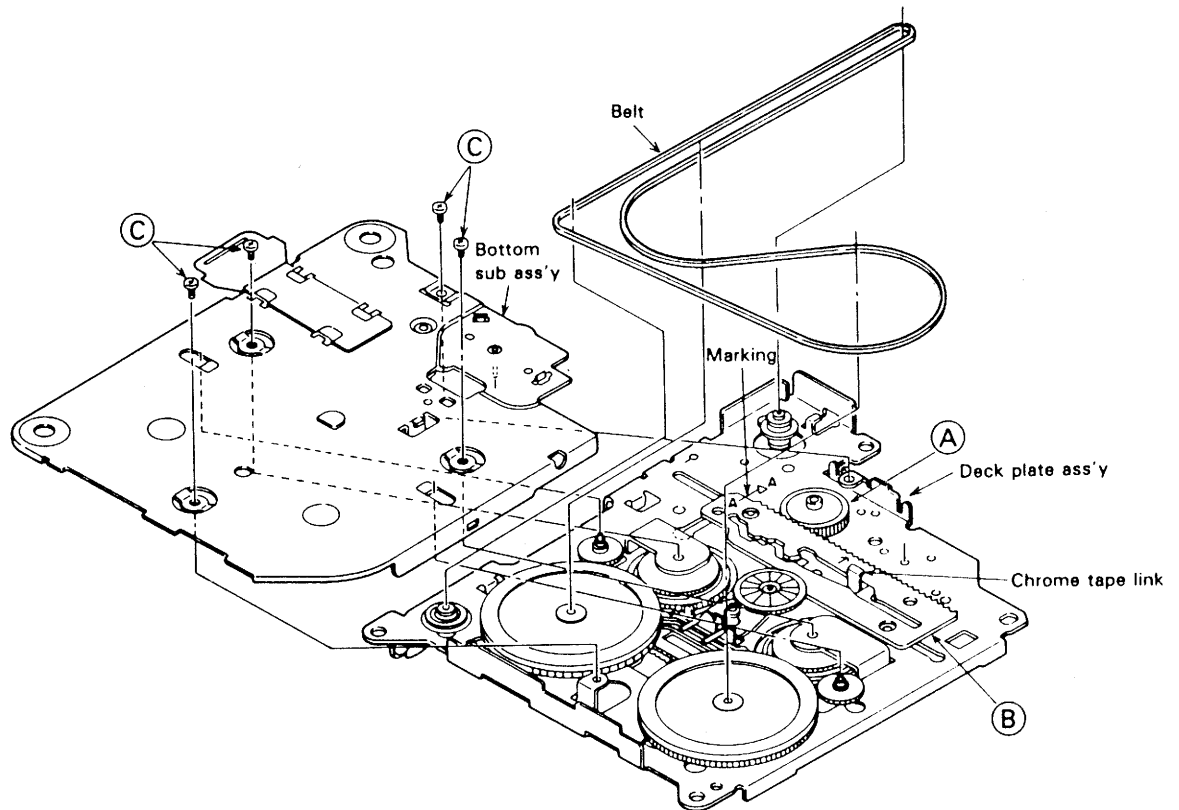
Item	Adjustment	Measuring Instrument
Noise Convergence	(MAIN) 1) Input the 98.1MHz frequency at 55dB. 2) Adjust the outputs evenly to $-15 \pm 3\text{dB}$ by VR102 when the SG output is set to -20dB . (SUB) 1) Follow the same adjustment steps as MAIN above. (VR103)	SG Milli-volt meter
Stop Sensitivity	1) Input the 98.1MHz/55dB signal (1kHz MOD). 2) Short the TP102 and TP101. 3) Adjust VR104 so that the voltage of TP103 is $1.5\text{V} \pm 0.01\text{V}$.	SG Milli-volt meter

●DOLBY SECTION

Item	Adjustment
Dolby NR	1) Insert a Dolby level test tape (400Hz-200nWb/m), connect the millivoltmeter to TP301 (L) and TP302 (R), and adjust VR1 (L) and VR2 (R) to obtain an output of $300\text{mV} \pm 1\text{dB}$. (Dolby switch: OFF)

MECHANISM ASSEMBLING PROCEDURES:

- While rotating the power gear (A) on the deck plate ass'y, move the mode plate (B) so that the markings "A" and "A'" are aligned.
- Align the marking ▼ in the mode switch of the bottom sub ass'y with the marking ▲ in the switch terminal.
- Place the bottom sub ass'y in the deck plate ass'y and tighten 4 screws (C).
- * While placing the bottom sub ass'y in the deck plate ass'y, confirm that the markings in the bottom sub ass'y, mode plate and deck plate ass'y, and pin in the mode switch is aligned with each marking.



■PROCEDURE FOR REPAIR AND ADJUSTMENT:

1) Cautions

- This unit, as operates on single power supply, operates on the basis of various mid-point potential (such as, 2.5V and 4.7V mid points).
- When observing the operating state from the reference by an oscilloscope, connect CH1 GND to the mid point for measurement. The other probe, GND should not be connected anywhere.
- When measuring the laser current, the mis-connection of the measuring point may damage the laser (in the pick-up section).

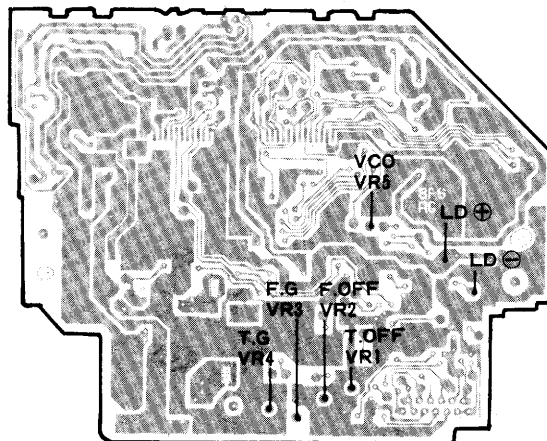
2) Test Disc

- SONY TYPE4 (YEDS18) 12cm
- ABEX MODEL TCD-783 8cm

3) Follow the precautions in handling the pick-up of special notes on page 2.

4) Adjusting order

- | | |
|--------------------|------------------|
| 1. Tracking offset | 3. Focus gain |
| 2. Focus offset | 4. Tracking gain |



■Adjusting Tracking Offset

● Purpose

To optimize the EF balance of the tracking servo.

● When adjustment is incomplete

It takes a long time for search. The carriage runs away.

● Measuring instrument

Oscilloscope

● Measuring point

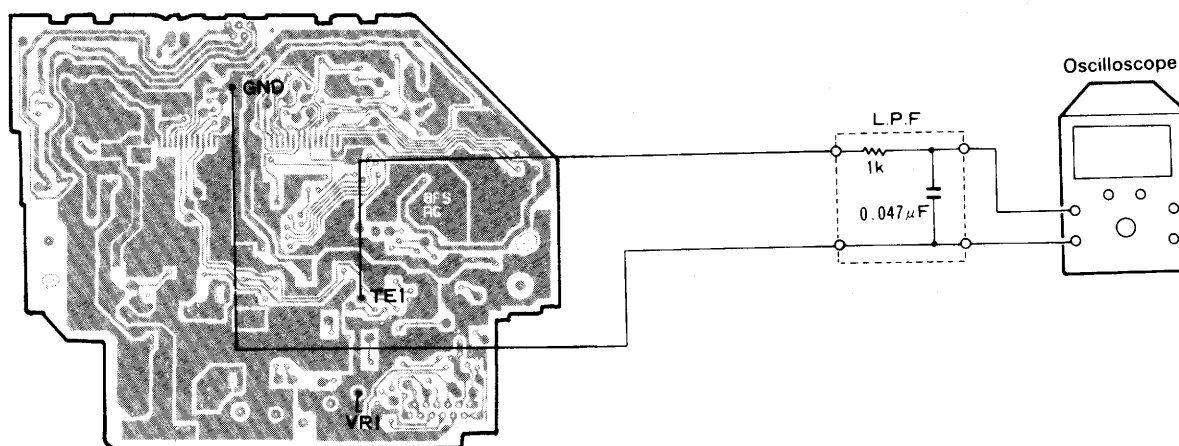
TP TE1

● Test disc and setting state

SONY TYPE4, normal mode

● Adjustment : VR1

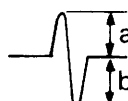
Connection diagram



Adjusting procedure

1. Make sure that the power is turned off and connect the measuring instrument as indicated in the above diagram.
2. Play back the first music of SONY TYPE4.
3. Perform the manual search and check the state of TR Jump (track jump) by an oscilloscope.

Adjust the tracking offset adjusting volume (VR1) so that the waveform may become symmetrical in both forward and reverse modes.



Adjust so as to be $a \div b$.

■ Adjusting the Tracking Servo Loop Gain

- **Purpose**

To adjust the tracking servo loop gain to be optimum value.

- **When adjustment is incomplete**

The playability and vibration proof are deteriorated.

- **Measuring instrument**

Oscillator, double-pointer mV meter

- **Measuring point**

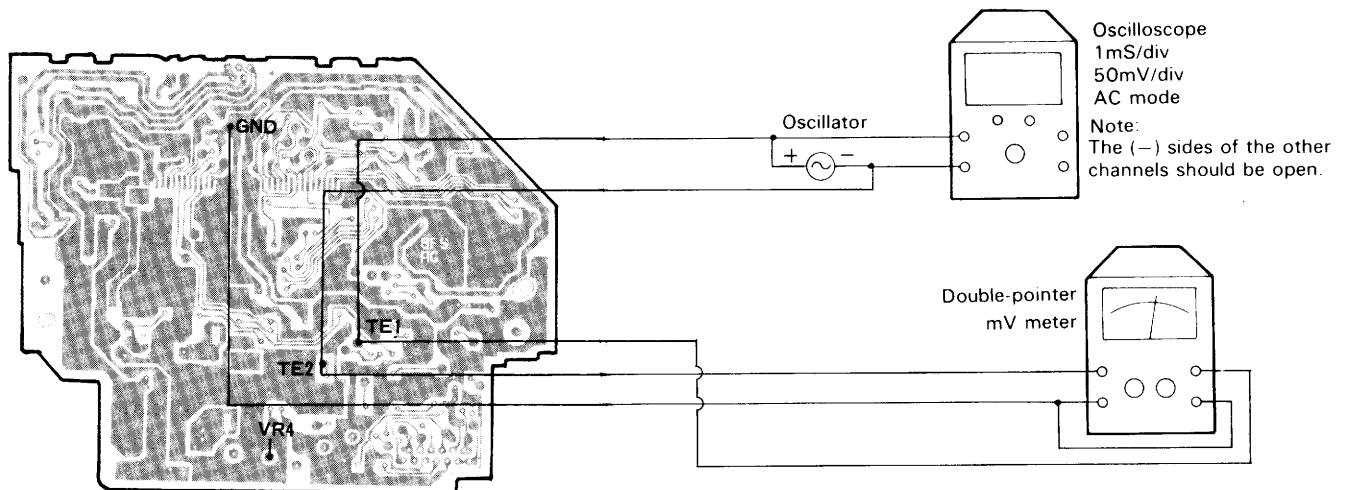
SERTR1, SERTR2, TP, TE1, TE2

- **Test disc and setting state**

SONY TYPE4, normal mode

- **Adjustment : VR4**

Connection diagram



Adjusting procedure

1. Preset the oscillator. Set the output amplitude with no load to be 1Vp-p (at 1kHz).

Note: The set value of the output level varies slightly depending on the oscillator. This set value is the one when the oscillator of about 500Ω output impedance is used. Adjustment should be made under the condition in which the servo can be activated stably even after the output of the oscillator was applied, causing no mistracking. Low output impedance provides low set output.

2. Make sure that the power is turned off and connect the measuring instruments as indicated in the above diagram.
3. Play back the first music of SONY TYPE4.
4. Adjust the tracking gain adjusting volume (VR4) so that the error of the double-pointer mV meter may be not more than $0 \pm 0.5\text{dB}$ (under the condition in which 1kHz output is generated from the oscillator).

■ Adjusting the Focus Servo Loop Gain

- **Purpose**

To adjust the focus servo loop gain to be optimum value.

- **When adjustment is incomplete**

The playability and vibration proof are deteriorated. S detection is apt to fail.

- **Measuring instrument**

Oscillator, double-pointer mV meter

- **Measuring point**

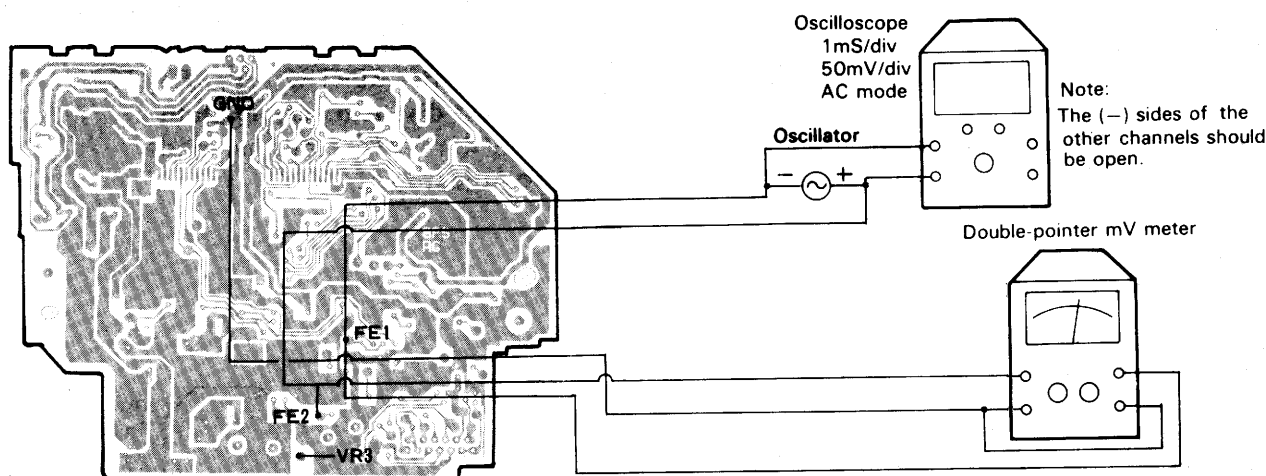
TP FE1, FE2

- **Test disc and setting state**

SONY TYPE4, normal mode

- **Adjustment : VR3**

Connection diagram



Adjusting procedure

1. Preset the oscillator. Set the output amplitude with no load to be 1Vp-p (at 1kHz).

Note: The set value of the output level varies slightly depending on the oscillator. This set value is the one when the oscillator of about 500Ω output impedance is used. Adjustment should be made under the condition in which the servo can be activated stably even after the output of the oscillator was applied, causing no mistracking. Low output impedance provides low set output.

2. Make sure that the power is turned off and connect the measuring instruments as indicated in the above diagram.
3. Play back the first music of SONY TYPE4 in the normal mode.
4. Adjust the tracking gain adjusting volume (VR3) so that the error of the double-pointer mV meter may be not more than $0 \pm 0.5\text{dB}$ (under the condition in which 1kHz output is generated from the oscillator).

Adjusting the Focus Offset

● Purpose

To adjust the focus servo bias to be optimum value.

● When adjustment is incomplete

The focus is hard to be closed. Playability is deteriorated.

● Measuring instrument

Oscilloscope

● Measuring point

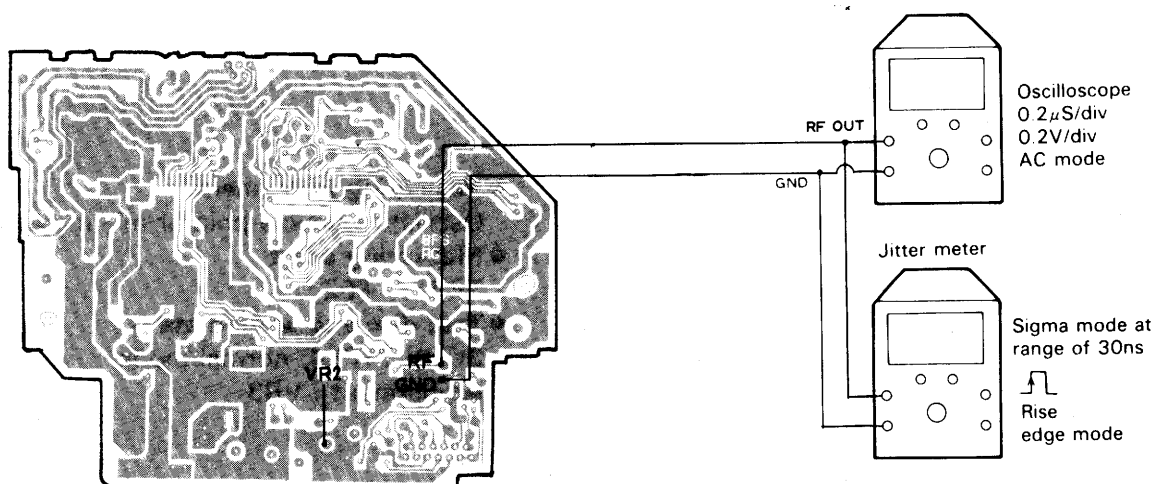
RF

● Test disc and setting state

SONY TYPE4, normal mode

● Adjustment : VR2

Connection diagram



Adjusting procedure

1. Play back the first music in the normal mode.
2. Connect the RF OUT to the jitter meter (Meguro) and adjust the focus offset adjusting volume (VR2) so that the jitter may be optimized.

(When there is no jitter meter, observe the RF OUT based on GND by an oscilloscope and adjust VR2 so that RF may be maximized and the eye pattern may be optimized.)

Note: Use the probe of 10 : 1 for connection to the jitter meter.

■ Adjusting VCO Free-run Frequency

● Purpose

To adjust the free-run frequency of reference clock for EFM decoder to be optimum value.

● When adjustment is incomplete

Spindle lock is impossible. The sound is not emitted or breaks.

The long access time is long. (22 music → 1 music or 1 music → 22 music by SONY TYPE4).

● Measuring instrument

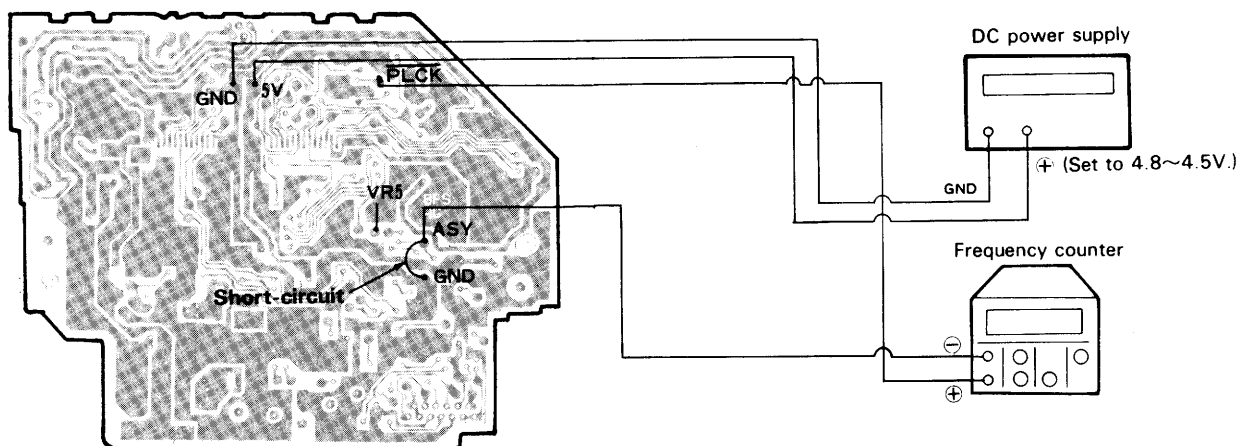
Frequency counter, various jigs for test mode

● Measuring point

Pin 70 of $\overline{\text{PLCK}}$ CXD1167

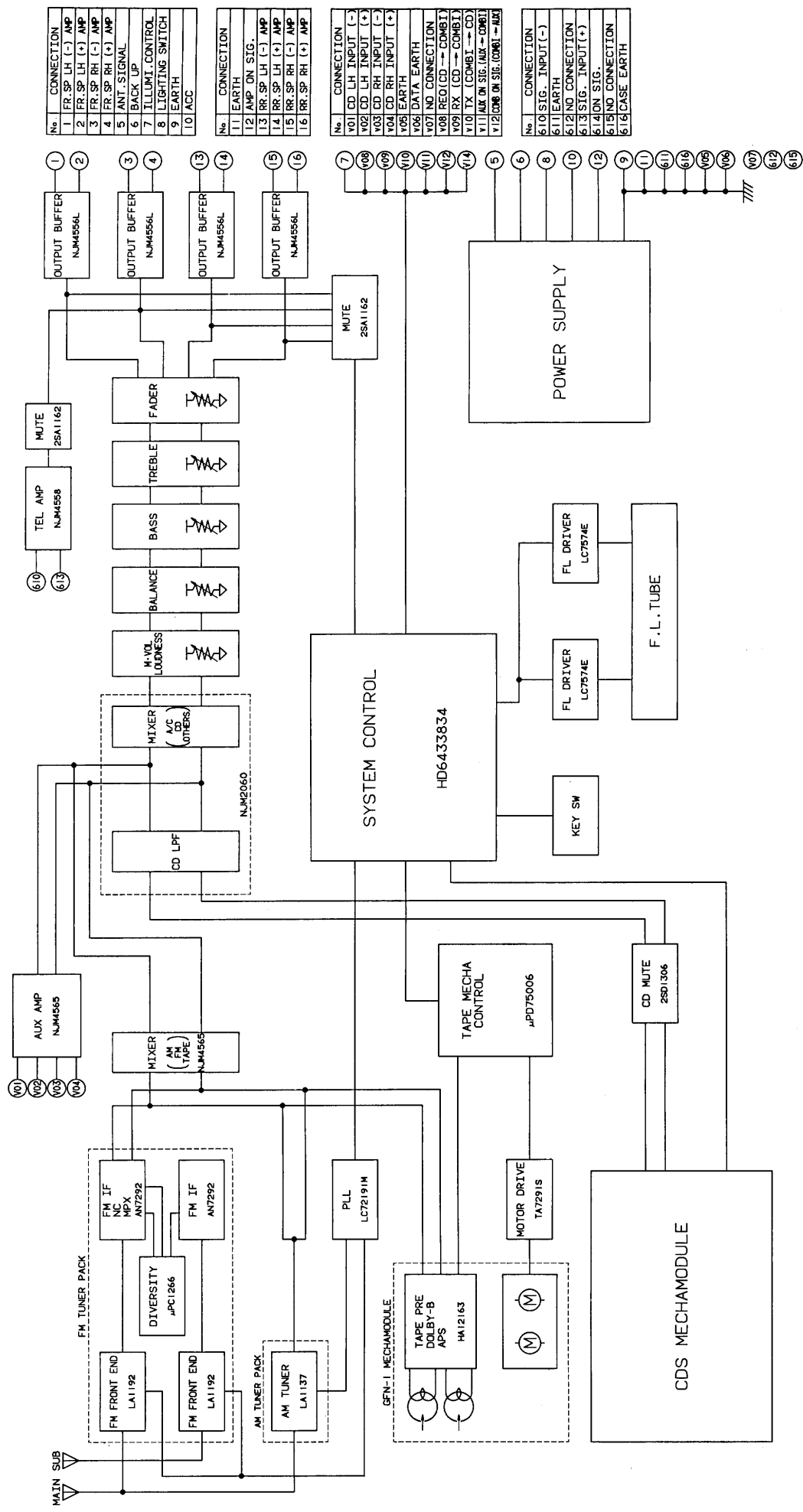
● Adjustment : VR5

Connection diagram



1. Remove the mechanical module from the set.
2. Short-circuit ASY to GND.
3. Connect A-Vcc and 5V to the DC power supply.
4. Turn ON the power.
5. Read the numeric value from the frequency counter.
6. Adjust to be $F=4.20\text{MHz} \pm 10\text{kHz}$.
7. Turn OFF the power.
8. Disconnect the connection.

BLOCK DIAGRAM:



No.	CONNECTION
1	FR. SP. LH (-) AMP
2	FR. SP. LH (+) AMP
3	FR. SP. RH (-) AMP
4	FR. SP. RH (+) AMP
5	ANT. SIGNAL
6	BACK UP
7	ILLUM. CONTROL
8	LIGHTING SWITCH
9	EARTH
10	ACC

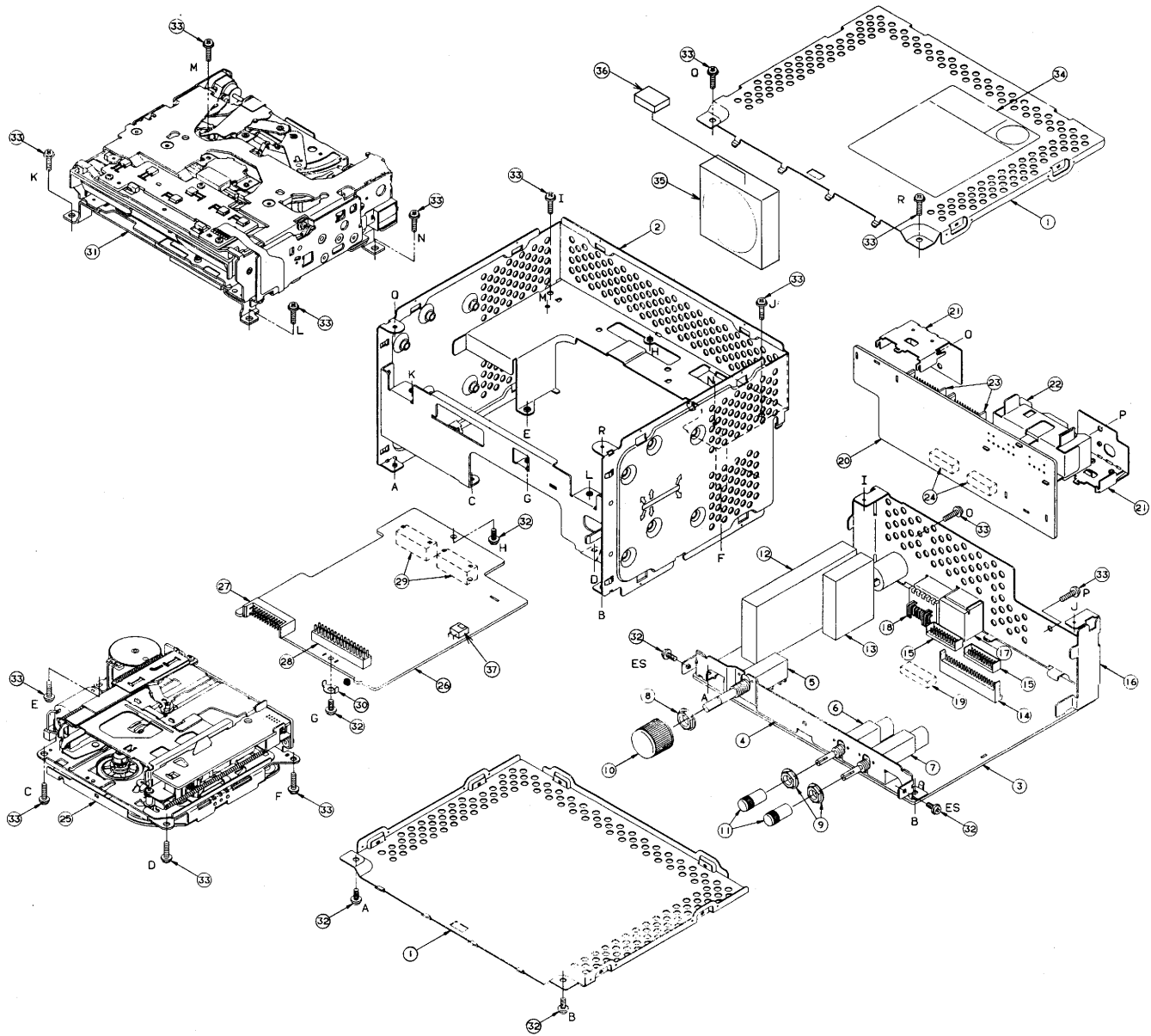
No.	CONNECTION
11	EARTH
12	AMP ON SIG.
13	RR. SP. LH (-) AMP
14	RR. SP. LH (+) AMP
15	RR. SP. RH (-) AMP
16	RR. SP. RH (+) AMP

No.	CONNECTION
V01	CD LH INPUT (-)
V02	CD LH INPUT (+)
V03	CD RH INPUT (-)
V04	CD RH INPUT (+)
V05	EARTH
V06	DATA EARTH
V07	NO CONNECTION
V08	REQ (CD \rightarrow COMBI)
V09	RX (CD \rightarrow COMBI)
V10	TX (COMBI \rightarrow CD)
V11	AUX ON SIG. (AUX \rightarrow COMBI)
V12	COMB ON SIG. (COMBI \rightarrow AUX)

No.	CONNECTION
610	SIG. INPUT (-)
611	EARTH
612	NO CONNECTION
613	SIG. INPUT (+)
614	ON SIG.
615	NO CONNECTION
616	CASE EARTH

EXPLODED VIEW • PARTS LIST:

©Main section



NO	PART NO.	DESCRIPTION	QTY	NO	PART NO.	DESCRIPTION	QTY
1	310-1549-00	UPPER CASE	2	20	039-0224-01	POWER PWB	1
2	946-0050-00	CHASSIS ASSY(PN-2083D)	1	21	331-0393-00	TR HOLDER	2
	946-0050-10	(PP-20831)		22	074-1069-01	OUTLET SOCKET*NS10P+6P	1
3	039-0224-01	MAIN PWB	1	23	076-0477-22	PLUG*22P	2
4	331-0391-00	FRONT PLATE	1	24	074-0898-20	OUTLET SOCKET*20P	2
5	016-2005-00	VARIABLE-R*VOL	1	25	930-0736-01	TAPE-MECHANISM*GFN-1	1
6	016-4210-00	VARIABLE-R*BASS/BAL	1	26	039-0224-01	POWER PWB	1
7	016-4320-00	VARIABLE-R*TREB/FAD	1	27	076-0477-26	PLUG*26P	1
8	722-0368-00	NUT	1	28	076-0391-32	PLUG*32P	1
9	722-0433-00	NUT	2	29	074-1047-22	OUTLET SOCKET*22P	2
10	380-5317-01	KNOB	1	30	073-0731-00	TERMINAL	1
11	380-5312-00	KNOB	2	31	929-0040-04	CD-MECHANISM-MODULE	1
12	880-1725B	FM TUNER BLOCK	1	32	716-1494-00	IT SCREW	6
13	880-1514C	AM TUNER BLOCK	1	33	714-2604-81	MACHINE SCREW	14
14	076-0487-20	PLUG*20P	1	34	286-7796-06	SETPLATE(PN-2083D)	1
15	076-0368-20	PLUG*20P	2		286-8153-01	(PP-20831)	
16	331-0392-00	REAR PLATE	1	35	020-3017-00	FAN MOTOR	1
17	074-0850-06	OUTLET SOCKET*DIN	1	36	345-7577-00	SPACER	1
18	074-1013-00	OUTLET SOCKET*12P	1	37	076-0277-02	PLUG*2P	1
19	345-3166-00	SPACER	1				

■ PARTS LIST:

◎Electrical section

● SWITCH P.W.B.

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
D801	001-0412-18	LED GL-3EG8	1	C802, 803	176-4701-00	CHIP-C 47pF	2
L801	010-2199-28	COIL*22 μ H	1	C801, 804, 805	178-2232-05	CHIP-C 0.022 μ F	3
IC801, 802	051-1637-00	IC LC7574E	2	C806, 807	178-4745-06	CHIP-C 0.47 μ F	2
Q801-804	125-2004-01	TRANSISTOR RN1401	4				
	125-2020-01	DTC143EK					
Q805, 806	125-2031-02	TRANSISTOR MUN2211	2				
	125-2004-02	RN1402					
	125-2005-01	UN2211					
	125-2020-02	DTC114EK					

● MAIN P.W.B.

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
D505	001-0334-30	DIODE RL202	1	C107, 111, 121	043-1601-10	CHIP-C 0.1 μ F	10
D301, 302, 502	001-0356-00	DIODE 1SS184	3	135, 401, 404			
	001-0354-00	MA151WK		512, 523, 525			
	001-0506-00	DAN202K		703			
D517	001-0377-28	DIODE MA4051L	1	CCT417, 420	050-0122-50	COMPONENT-CCT*10k	2
	001-0376-28	MTZJ5.1A		CCT714, 724	050-0122-53	COMPONENT-CCT*1k	8
D403	001-0377-38	DIODE MA4068M	1	729, 733, 740			
	001-0376-39	MTZJ6.8C		744, 746, 747			
	001-0400-38	HZS6.8JB2		IC202	051-0350-55	IC NJM4558M	1
D501	001-0377-40	DIODE MA4075L	1	IC301-304	051-0556-01	IC NJM2058M	4
	001-0376-41	MTZJ7.5B		IC101	051-0599-51	IC NJM2903M	1
	001-0400-40	HZS7.5JB1		IC702	051-0869-55	IC NJM2103M	1
D202	001-0377-44	DIODE MA4082M	1	IC402	051-1014-10	IC TA7291S	1
	001-0376-45	MTZJ8.2C		IC201, 205	051-1292-00	IC NJM4565M	2
	001-0400-44	HZS8.2JB2		IC305-308	051-1407-00	IC NJM4556L	4
D516	001-0377-47	DIODE MA4091M	1	IC204	051-1500-00	IC NJM2060M	1
	001-0376-48	MTZJ9.1C		IC102	051-1887-05	IC LC72191MHS	1
	001-0400-47	HZS9.1JB2		IC501	051-1905-00	IC AN77L05	1
D102, 512	001-0377-48	DIODE MA4091H	2	IC701	052-3116-01	IC HD6433834A14FI	1
	001-0376-49	MTZJ10A		IC401	052-4004-00	IC μ PD75006GB-643-3B4	1
	001-0400-48	HZS9.1JB3		X401	060-0130-50	CERA-RESONATOR*4.19MHz	1
D513	001-0377-69	DIODE MA4180M	1	X701	060-0319-00	CERA-RESONATOR*4.9152MHz	1
	001-0376-70	MTZJ18C		SUP102	060-0122-10	SURGE PROTECTOR	1
	001-0400-69	HZS18JB3		X101	061-1066-00	CRYSTAL*7.2MHz	1
D205	001-0421-38	DIODE MTZJ36	1	Q201, 302-305	100-1162-00	TRANSISTOR 2SA1162	6
D506	001-0503-03	DIODE HZS3ALL	1	514	100-1037-00	2SA1037	
D710-712	001-0516-00	DIODE MA111	3		101-0709-00	2SB709	
D203, 204, 206	001-0589-00	DIODE 1SS145	4	Q106, 109	100-1298-00	TRANSISTOR 2SA1298	2
207				Q510	100-1359-00	TRANSISTOR 2SA1359	1
D510, 511	001-0626-00	DIODE 1A2	2	Q403, 405	100-1431-00	TRANSISTOR 2SA1431	2
	001-0466-00	S5688B		Q505, 515	101-1073-00	TRANSISTOR 2SB1073	2
D101, 103, 201	001-0638-00	DIODE WG713A	16	Q521, 524	101-1188-00	TRANSISTOR 2SB1188	2
401, 504, 507	001-0330-00	1SS119		Q203, 207-210	102-2712-00	TRANSISTOR 2SC2712	5
509, 701-709					102-2412-00	2SC2412	
TH701	002-0214-05	THERMISTOR	1		102-2812-00	2SC2812	
T501	009-0470-02	CHOKE	1	Q301, 601, 602	103-1306-00	TRANSISTOR 2SD1306	3
T502	009-0621-01	CHOKE	1		103-1328-00	2SD1328	
L103-105, 107	010-2330-24	COIL*22 μ H	6	Q507, 517, 523	103-1406-00	TRANSISTOR 2SD1406	4
401, 701				526			
L100	010-2003-03	COIL	1	Q501	103-1766-00	TRANSISTOR 2SD1766	1
VR102, 103	012-4738-00	VARIABLE-R*100k	2	Q518	103-1858-00	TRANSISTOR 2SD1858	1
VR104	012-4738-07	VARIABLE-R*22k	1	Q105	108-0669-00	FET 2SK669	1
R240, 243-249	032-0106-15	CHIP-R 1/10W 100k \pm 0.5%	8	Q705, 706, 708	125-0006-00	TRANSISTOR UN2110	3
C128	042-0397-00	CHIP-C 16V 1 μ F TAN	1		125-0019-03	DTA144TK	
C201, 202, 239	042-0405-00	ELECTRO-C 16V 10 μ F	4	Q512, 710	125-0013-07	TRANSISTOR RN2427	2
240				Q111, 205, 401	125-0024-02	TRANSISTOR MUN2111	6
C131, 132	042-0405-07	ELECTRO-C 50V 1 μ F	2	503, 508, 603	125-0001-01	UN2111	
C332-339	042-0405-10	ELECTRO-C 10V 220 μ F	8		125-0002-02	RN2402	
C527	042-0427-02	CHIP-C 16V 33 μ F TAN	1		125-0014-02	DTA114EK	
C206, 207	042-0471-01	ELECTRO-C 10V 10 μ F	6	Q702	125-0024-03	TRANSISTOR MUN2112	1
243-246					125-0001-02	UN2112	
C603-606	042-0473-00	ELECTRO-C 16V 10 μ F	4		125-0002-03	RN2403	
C116	043-1600-33	CHIP-C 0.033 μ F	1		125-0014-03	DTA124EK	
C133, 138, 139	043-1600-47	CHIP-C 0.047 μ F	3	Q404, 406	125-2004-06	TRANSISTOR RN1406	2
C208	043-1600-68	CHIP-C 0.068 μ F	1		125-2020-06	DTC143ZK	

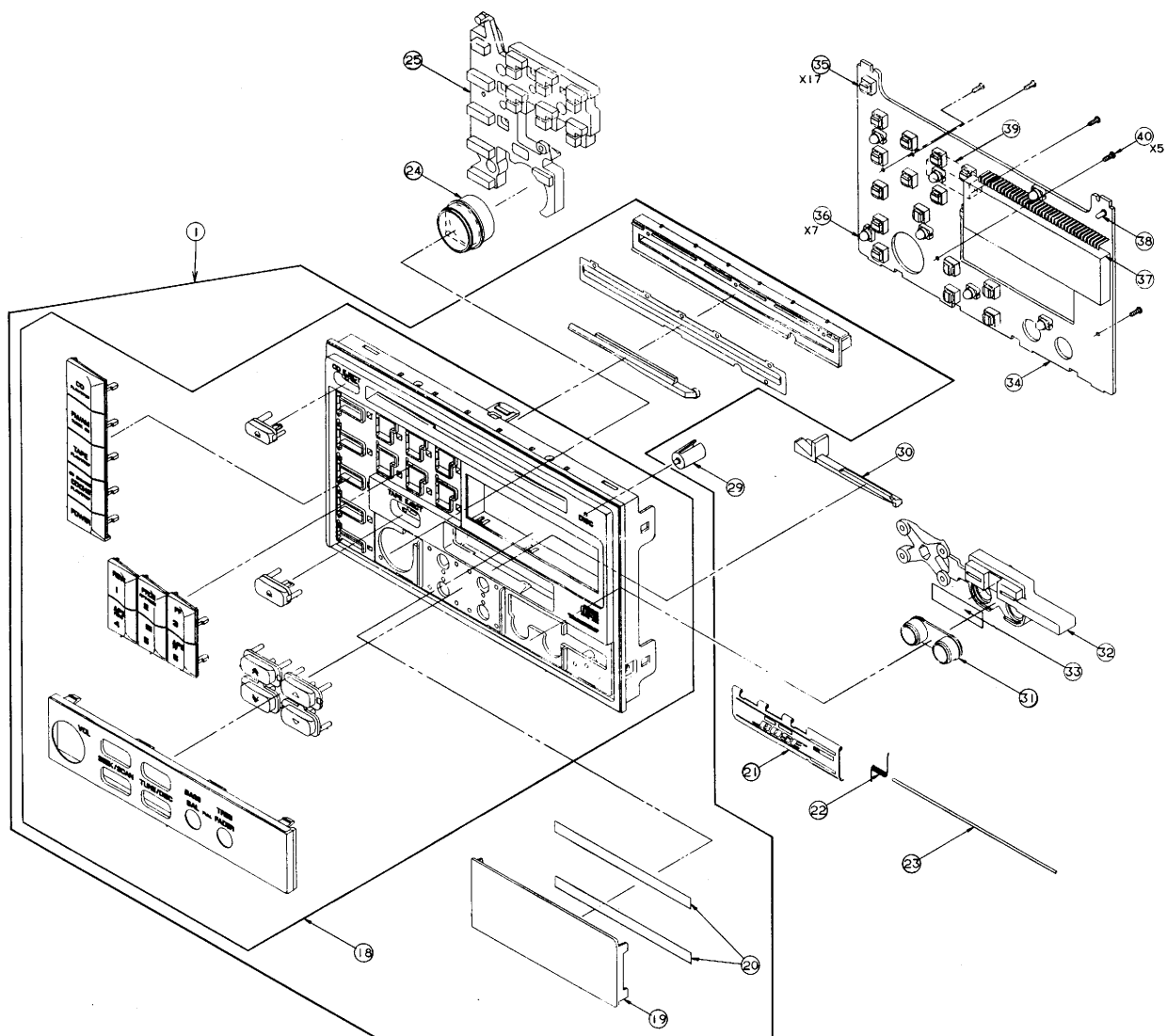
REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
Q102-104, 107 108, 110, 112 206, 402, 504 506, 509, 511 513, 516, 522 525, 703, 707 709, 711	125-2031-02 125-2004-02 125-2005-01 125-2020-02	TRANSISTOR MUN2211 RN1402 UN2211 DTC114EK	21	C130, 249-251 301	178-1022-05	CHIP-C 1000pF	5
				C118, 601, 602 704	178-1032-05	CHIP-C 0.01 μ F	4
				C104, 108-110 112, 248, 501 502, 504-509	178-2232-05	CHIP-C 0.022 μ F	14
Q204, 502, 704	125-2031-03 125-2004-03 125-2005-02 125-2020-03	TRANSISTOR MUN2212 RN1403 UN2212 DTC124EK	3	C314, 315	178-2712-05	CHIP-C 270pF	2
R511	114-1201-31	FILM-R 3W 12 Ω	1	C233, 234	178-2722-05	CHIP-C 2700pF	2
R416	114-2291-11	FILM-R 1W 2.2 Ω	1	C235, 236	178-3322-05	CHIP-C 3300pF	2
R514	114-3391-11	FILM-R 1W 3.3 Ω	1	C113, 117, 205	178-4722-05	CHIP-C 4700pF	3
C316, 317	172-1031-11	POLYESTOR-C 0.01 μ F	2	C318, 319	178-8222-05	CHIP-C 8200pF	2
C513, 521	172-1041-11	POLYESTOR-C 0.1 μ F	2	C129, 403	182-1073-32	ELECTRO-C 16V 100 μ F	2
C302	172-1241-11	POLYESTOR-C 0.12 μ F	1	C114, 522	182-4763-22	ELECTRO-C 10V 47 μ F	2
C310, 313	172-1541-11	POLYESTOR-C 0.15 μ F	2	C607	183-1043-62	ELECTRO-C 50V 0.1 μ F	1
C303	172-2241-11	POLYESTOR-C 0.22 μ F	1	C705	183-1053-62	ELECTRO-C 50V 1 μ F	1
C311, 312	172-2741-11	POLYESTOR-C 0.27 μ F	2	C106, 247, 304 322, 510, 518	183-1063-32	ELECTRO-C 16V 10 μ F	6
C308, 309	172-4741-11	POLYESTOR-C 0.47 μ F	2	C524, 530	183-1073-22	ELECTRO-C 10V 100 μ F	2
C103, 237, 238 241, 242	176-1007-00	CHIP-C 10pF	5	C119	183-3363-22	ELECTRO-C 10V 33 μ F	1
C123, 127, 212 220, 305	176-1011-00	CHIP-C 100pF	5	C122, 183, 228 29, 701, 702	183-4753-52	ELECTRO-C 35V 4.7 μ F	6
C136, 137	176-1501-00	CHIP-C 15pF	2	C526, 529, 531	183-4763-32	ELECTRO-C 16V 47 μ F	3
C227, 230	176-2201-00	CHIP-C 22pF	2	C519, 520	184-1083-32	ELECTRO-C 16V 1000 μ F	2
C203, 204, 231 232, 323-330	176-5601-00	CHIP-C 56pF	12	C331	184-2273-21	ELECTRO-C 10V 220 μ F	1
				C528	184-3373-11	ELECTRO-C 6.3V 330 μ F	1
				C503	184-3373-32	ELECTRO-C 16V 330 μ F	1
				C514	184-4773-32	ELECTRO-C 16V 470 μ F	1

● GFN-1 TAPE MECH. 930-0736-01 SIDE P.W.B.

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
VR1, 2	012-4431-06	VARIABLE-R*10k	2	C14	178-4722-05	CHIP-C 4700pF	1
R13	032-0098-03	CHIP-R 1/10W 18k \pm 2%	1	C1-4, 10, 11	178-5612-05	CHIP-C 560pF	6
C12, 13	043-1601-10	CHIP-C 0.1 μ F	2	C17	183-1043-61	ELECTRO-C 50V 0.1 μ F	1
IC1	051-1777-00	IC HA12163	1	C9	183-1053-61	ELECTRO-C 50V 1 μ F	1
C5, 6	172-1231-11	POLYESTOR-C 0.012 μ F	2	C15	183-2263-31	ELECTRO-C 16V 22 μ F	1
C7, 8	172-4731-11	POLYESTOR-C 0.047 μ F	2	C18	183-4753-51	ELECTRO-C 35V 4.7 μ F	1
C16	178-1032-05	CHIP-C 0.01 μ F	1				

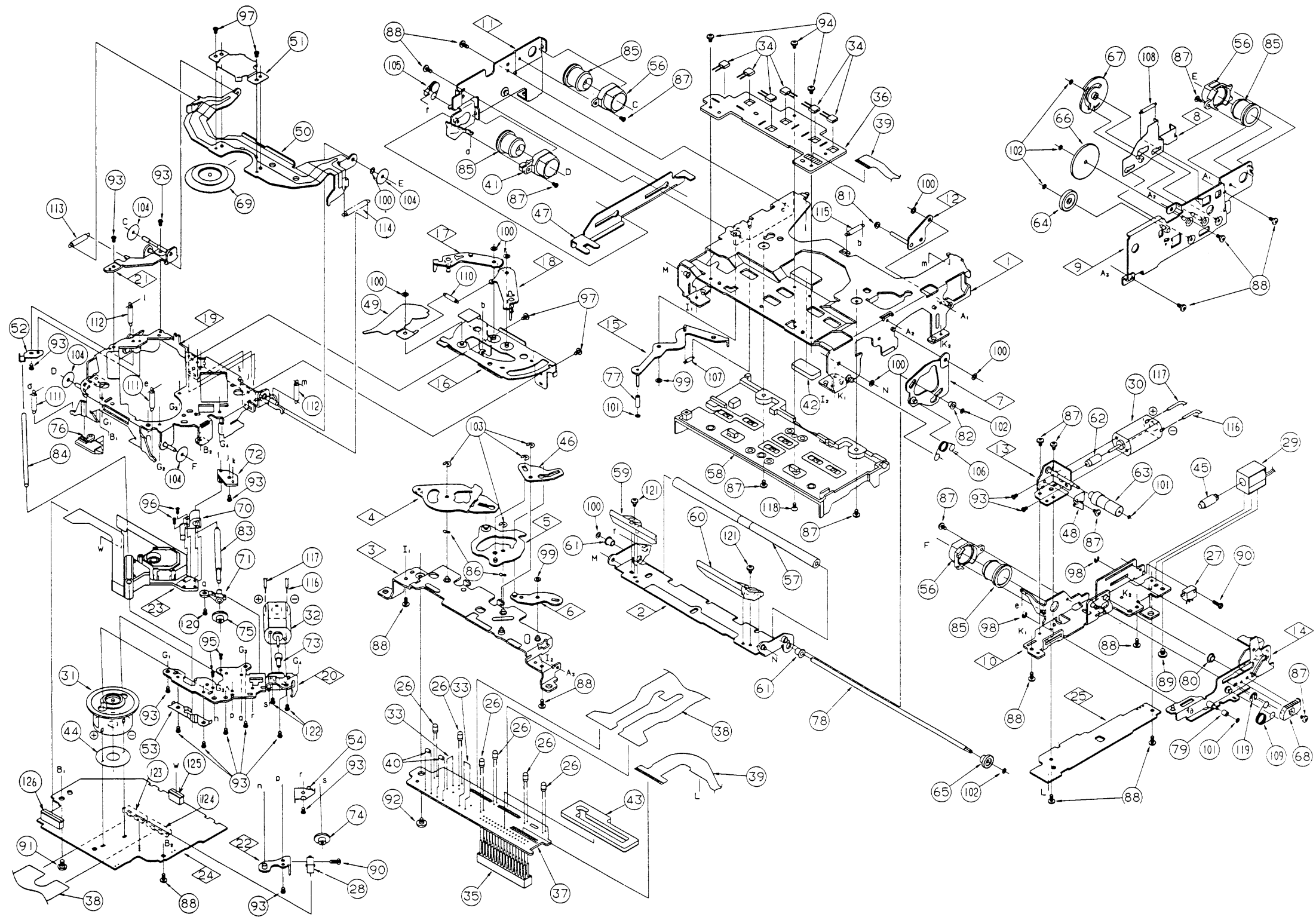
EXPLODED VIEW • PARTS LIST:

©Escutcheon section



NO	PART NO.	DESCRIPTION	QTY	NO	PART NO.	DESCRIPTION	QTY
1	940-1655A	ESCUTCHEON-ASSY	1	31	335-4639-00	ILLUMI RING	1
18	940-7637-01	SUB ESCUT-ASSY	1	32	335-4701-00	ILLUMI PLATE	1
19	373-0751-00	DIAL-CVR	1	33	347-3984-00	ILLUMI PAPER	1
20	347-3551-00	DOUBLE FACE	2	34	039-0225-01	SWITCH PWB	1
21	320-0512-00	DUSTPROOF-CVR(PN-2083D)	1	35	013-6300-00	SWITCH	17
	320-0512-01	(PP-2083I)		36	017-0433-00	PILOT LAMP(PN-2083D)	7
22	750-2626-00	SPRING	1		017-0433-01	(PP-2083I)	
23	341-1565-00	DOOR SHAFT	1	37	379-0418-10	INDICATOR	1
24	335-4638-00	ILLUMI RING	1	38	001-0412-18	LED*DISK IND	1
25	335-4700-00	ILLUMI PLATE	1	39	074-1047-26	OUTLET SOCKET*26P	1
29	335-4623-00	INDICATOR LENS	1	40	716-0872-00	PAD SCREW	5
30	335-4703-00	ILLUMI BAR	1				

EXPLODED VIEW • PARTS LIST: ©CD mechanism module section 929-0040-04



NO	PART NO.	DESCRIPTION	QTY
1	966-0129-05	CHASSIS-ASSY	1
2	966-0130-03	LWR-DISC-G-ASSY	1
3	966-0131-05	F-L--CHAS-ASSY	1
4	966-0132-02	F-LOCK-L-P-ASSY	1
5	966-0133-02	F-L-PLT-R-ASSY	1
6	966-0134-01	LC-LNK-A-ASSY	1
7	966-0135-00	POWER LINK-ASSY	1
8	966-0136-01	TRIG-PLT-ASSY	1
9	966-0137-03	GEAR PLATE-ASSY	1
10	966-0138-05	SFT-P-CHAS-ASSY	1
11	966-0139-05	DMP-BRKT-N-ASSY	1
12	966-0140-00	CLP-LIFT-L-ASSY	1
13	966-0141-02	MOTOR-BRKT-ASSY	1

NO	PART NO.	DESCRIPTION	QTY
14	966-0142-05	SHIFT-PLT-ASSY	1
15	966-0143-04	SENSOR-L-ASSY	1
16	966-0144-03	STAGE-P-ASSY	1
17	966-0145-02	STOP-A-L-ASSY	1
18	966-0146-03	STOP-A-R-ASSY	1
19	966-0303-00	DRIVE-PLT-ASSY	1
20	966-0182-02	DR-MO-BRKT-ASSY	1
21	966-0304-00	SIDE PLATE-ASSY	1
22	966-0150-02	SW-PLATE-ASSY	1
23	969-0002-01	PICK UP U-ASSY	1
24	039-0080-00	FLOAT PWB	1
25	039-9911-01	MECH PWB	1
26	001-0563-00	DIODE*GL380	6
27	013-3808-10	SWITCH	1

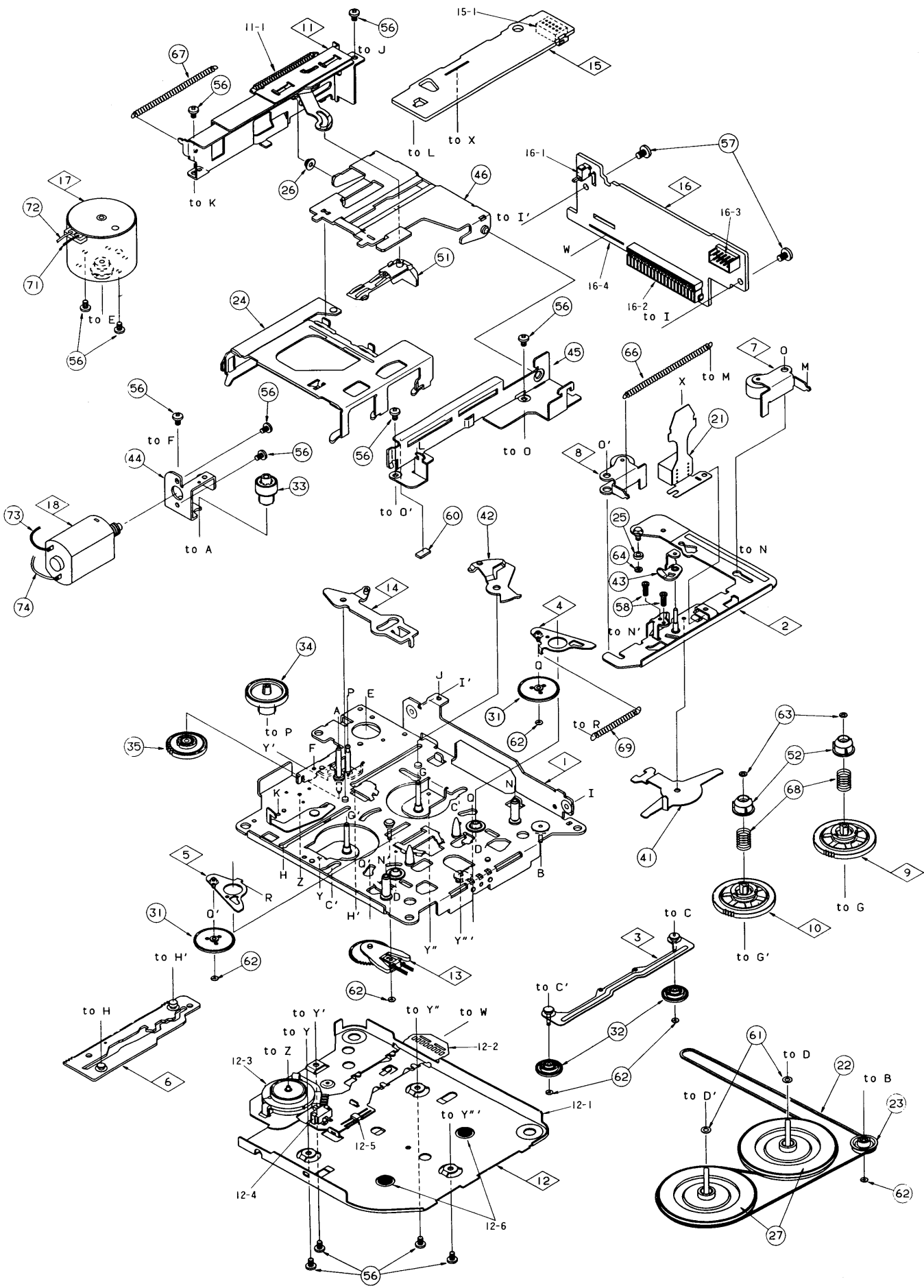
NO	PART NO.	DESCRIPTION	QTY
28	013-3808-11	SWITCH	1
29	960-4328-00	PLUNGER-ASSY	1
30	020-1501-00	DC-MOTOR	1
31	020-1509-00	DC-MOTOR*SPINDLE	1
32	020-1508-00	DC-MOTOR*SLED	1
33	060-0054-00	JUMPER WIRE	2
34	060-0252-01	PHOTO TR*PT4850F	6
35	074-0921-32	OUTLET SOCKET*32P	1
36	039-0009-00	SENSOR PWB	1
37	039-0006-00	LED-PWB	1
38	099-9343-00	FLEX PWB	1
39	039-0010-00	FLEX PWB	1
40	111-3011-93	FILM-R*300Ω	2
41	621-0201-02	DMP-HOLDER B-DL	1

NO	PART NO.	DESCRIPTION	QTY
42	345-6962-00	CLAMP-S-SHEET	1
43	345-6963-00	CN-SPACER	1
44	345-5112-00	MOTOR SHEET S	1
45	632-2047-00	CORE	1
46	620-0181-00	LOCK LINK B	1
47	620-0187-99	LOCK-L-PLATE	1
48	620-0190-00	MOTOR-BRKT-P-SP	1
49	620-0196-00	LOCK PLATE	1
50	620-0329-00	CLAMPER LINK	1
51	620-0198-03	CLAMPER PLATE	1
52	620-0202-00	HOLD PLATE	1
53	620-0328-00	SLID-S-PLATE	1
54	620-0204-03	SP-PLATE A	1
55	621-0200-02	DMP-HOLDER A-DL	3

NO	PART NO.	DESCRIPTION	QTY
57	621-0160-00	LOADING ROLLER	1
58	621-0111-03	U-DISC GUIDE	1
59	621-0112-01	SHUTTER L	1
60	621-0113-01	SHUTTER-R	1
61	621-0114-02	ROLLER SLEEVE	2
62	621-0115-01	WORM GEAR	1
63	621-0116-01	GEAR A	1
64	621-0117-01	GEAR B	1
65	621-0118-02	ROLLER GEAR	1
66	621-0119-01	GEAR C	1
67	621-0120-01	GEAR D	1
68	621-0121-00	RACK	1
69	621-0205-01	CLAMPER RING	1
70	621-0123-01	SCREW HOLDER	1
71	621-0168-01	LS-HOLDER A	1
72	621-0169-01	LS-HOLDER B	1
73	621-0170-01	DR-GEAR A	1
74	621-0171-01	DR-GEAR B	1
75	621-0172-01	DR-GEAR C	1
76	621-0173-00	FPC GUIDE	1
77	621-0159-00	S-LINK ROLLER	1
78	622-0744-01	ROLLER SHAFT	1
79	622-0745-00	PWR-LNK-ACT-ROL	1
80	622-0746-01	SFT-PLT-G-ROLR	1
81	622-0747-00	CLP-LIFT-ROLR	1
82	622-0748-00	LW-G-PLT-G-ROLR	1
83	624-0012-01	LEAD SCREW	1
84	624-0003-01	SLIDE SHAFT	1
85	629-0047-01	DAMPER-DL	4
86	684-0072-00	PLATE SPRING	2
87	714-2003-81	MACHINE SCREW*M2x3	10
88	714-2004-81	MACHINE SCREW*M2x4	12
89	714-2603-81	MACHINE SCREW*M2. 6x3	1
90	716-0791-00	SCREW*M2x5.7	2
91	716-1445-01	PWB-SCREW	1
92	716-1462-01	LED-PWB-SCREW	1
93	716-1468-00	SCREW*M2x2.5	14
94	716-1507-00	SCREW	3
95	739-1725-17	PRECISION SCREW	2
96	739-1730-17	PRECISION SCREW*M1.7x3	2
97	739-2020-17	PRECISION SCREW*M2.0x2	4
98	743-1500-10	E-RING*1.5	2
99	746-0622-01	WASHER	2
100	746-0624-01	WASHER	8
101	746-0724-00	WASHER	3
102	746-0761-00	WASHER	4
103	743-2000-10	E-RING	4
104	746-0846-00	WASHER	4
105	750-2875-01	RO-TO-SP-L	1
106	750-2876-02	RO-TO-SP-R	1
107	750-2877-01	SEN-LINK-SP	1
108	750-2878-00	TRG-PLT-SP	1
109	750-2879-01	SFT-PLT-TO-SP	1
110	750-2880-00	LOCK-P-SP	1
111	750-2881-01	DAMPER SP-F	2
112	750-2882-00	DUMPER-SP-R	2
113	750-2883-01	CLP-SP-L	1
114	750-3055-00	CLP-SP-R	1
115	750-2885-00	CENTER-SP	1
116	800-4904-60	VINYL-COAT-WIRE*BLACK	2
117	802-4904-60	VINYL-COAT-WIRE*RED	2
118	716-1488-00	SCREW	1
119	744-0037-00	E-RING	1
120	716-1524-00	SCREW*M2x2.5	1
121	716-1535-00	SCREW	2
122	739-2025-15	PRECISION SCREW	2
123	074-0923-13	OUTLET SOCKET*13P	1
124	074-0923-11	OUTLET SOCKET*11P	1
125	074-0924-05	OUTLET SOCKET*5P	1
126	074-0924-13	OUTLET SOCKET*13P	1

EXPLODED VIEW • PARTS LIST:

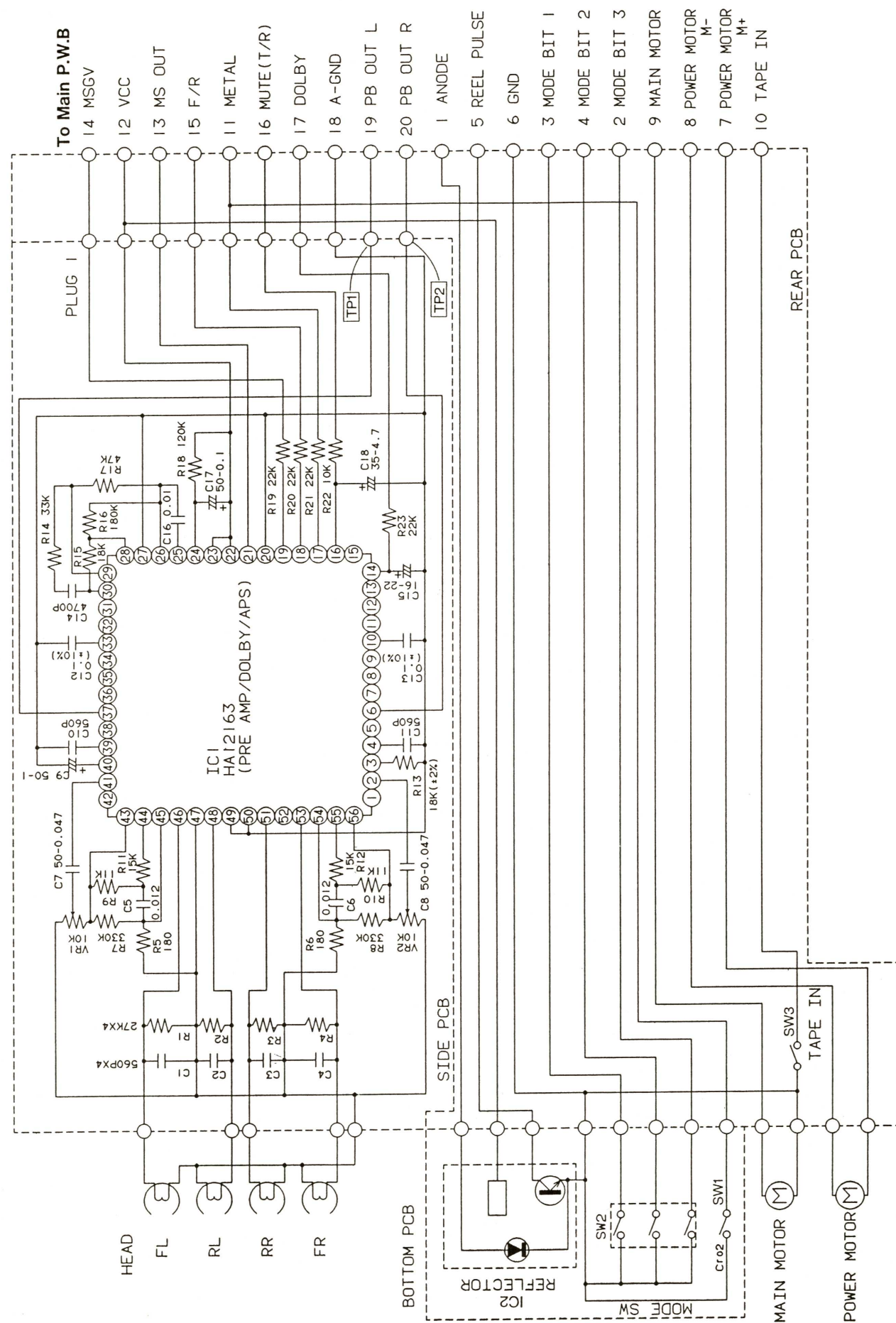
©Tape mechanism section 930-0736-01 (GFN-1)



NO.	PART NO.	DESCRIPTION	QTY	NO.	PART NO.	DESCRIPTION	QTY
1	960-4294-07	Deck plate assy	1	24	606-0101-04	Pack guide	1
2	960-4261-03	Head plate assy	1	25	610-0342-01	Head-P-roller	1
3	960-4262-03	FF-REW-P-assy	1	26	610-0343-00	Guide-A-roller	1
4	960-4263-01	Idler-P-assy F	1	27	611-0091-02	Flywheel	2
5	960-4264-01	Idler-P-assy R	1	31	613-0285-01	Idler gear	2
6	960-4266-04	Mode plate assy	1	32	613-0286-02	FF/REW gear	2
7	960-4269-04	Roller assy F	1	33	613-0288-01	Herical gear	1
8	960-4270-04	Roller assy R	1	34	613-0289-01	Gear A	1
9	960-4348-01	Reel assy F	1	35	613-0290-00	Power gear	1
10	960-4349-01	Reel assy R	1	41	630-2597-01	Change link	1
11	960-4298-02	Eject sub assy	1	42	630-2598-04	Eject link	1
11-1	750-2948-00	SW plate assy	1	43	630-2600-01	Adjust link	1
12	960-4338-00	Bottom sub assy	1	44	630-2601-02	Motor plate	1
12-1	960-4295-02	Bottom-P-assy	1	45	630-2626-01	PWB frame	1
12-2	099-9926-01	Flex PWB	1	46	630-2605-01	Guide arm	1
12-3	013-3951-00	Switch (MODE)	1	51	631-1992-01	Pack stopper	1
12-4	013-3953-00	Switch (CrO2)	1	52	631-1993-01	Slide bush	2
12-5	051-1776-00	IC (NJL5801K)	1	56	716-0484-00	Screw(M2×2.25)	13
12-6	746-0767-00	Washer	2	57	716-1648-00	Screw(M2.6×6)	2
13	960-4282-03	Detect sub assy	1	58	716-0833-10	Azimuth screw	2
14	960-4301-02	Play-L-assy GF	1	60	746-0861-00	Pack set washer	1
15	099-9927-00	Side PWB	1	61	746-0624-00	Washer	2
15-1	074-0898-10	Outlet socket	1	62	746-0724-00	Washer	6
16	990-0696-00	Rear PWB assy	1	63	746-0761-00	Washer	2
16-1	013-3906-00	Switch	1	64	746-0762-00	Washer	1
16-2	074-1028-20	Outlet socket	1	66	750-2946-02	Pinch spring	1
16-3	076-0368-10	Plug	1	67	750-2947-01	Eject-P-spring	1
16-4	099-9928-01	PWB	1	68	750-2949-00	Slide spring	2
17	SMA-130-100	DC motor(MAIN)	1	69	750-3017-01	Idler-P-spring	1
18	SMA-131-100	DC motor(POWER)	1	71	800-4910-60	Wire(BLK)	1
21	011-0307-33	Head	1	72	802-4911-60	Wire(RED)	1
22	602-0118-00	Belt	1	73	806-4914-60	Wire(BLU)	1
23	604-0040-20	Tension pulley	1	74	809-4914-60	Wire(WHT)	1

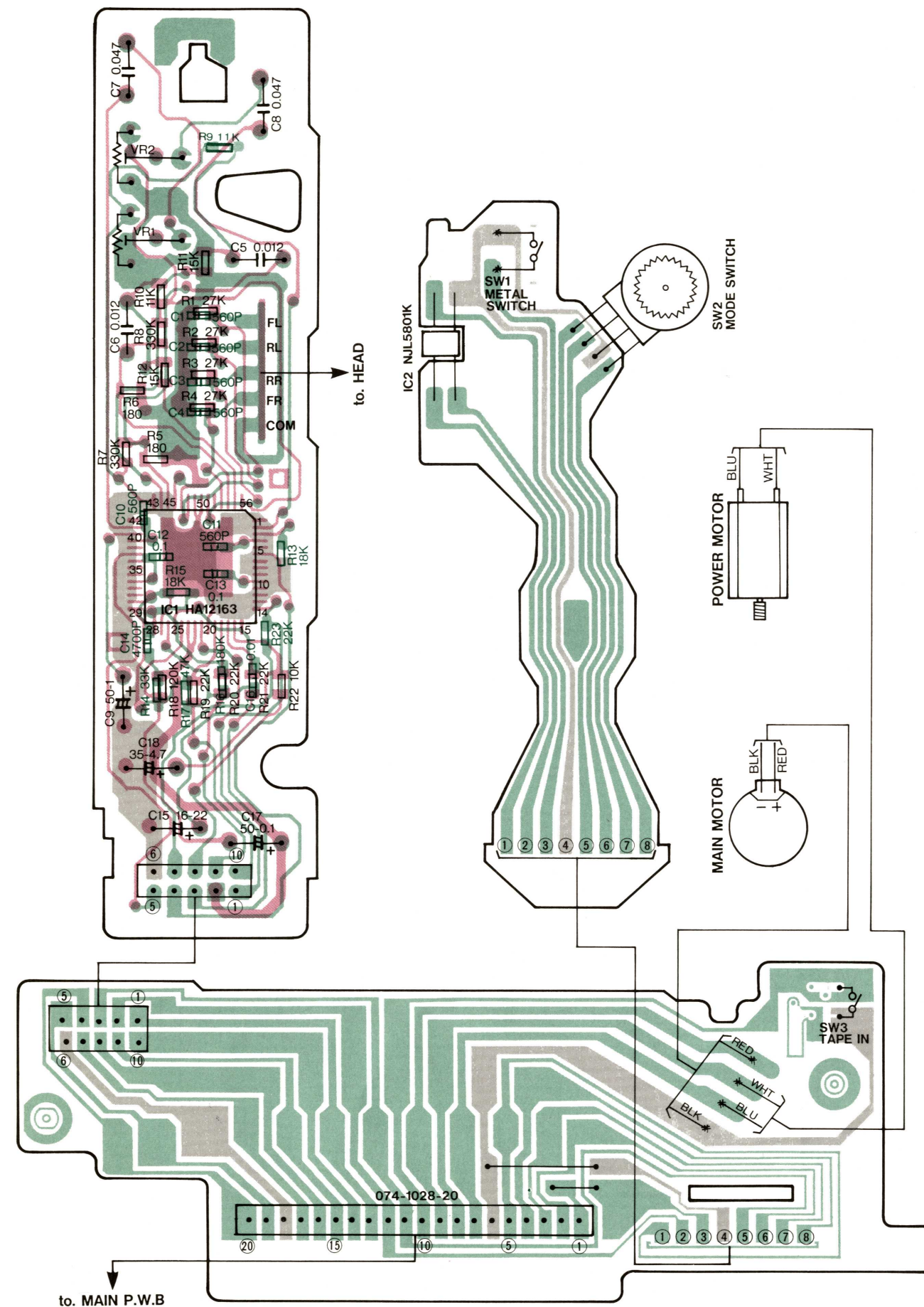
CIRCUIT DIAGRAM:

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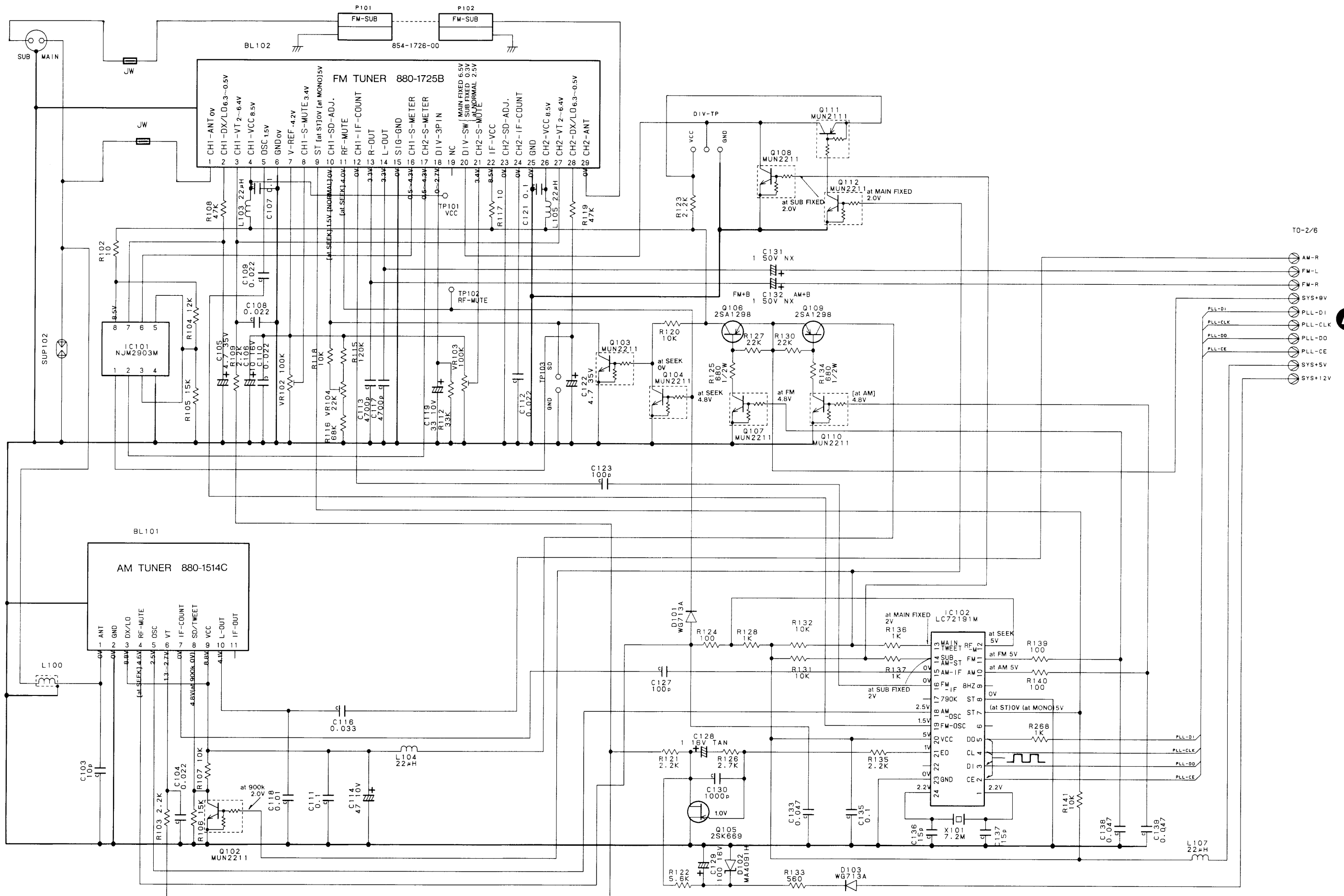
PRINTED WIRING BOARD:

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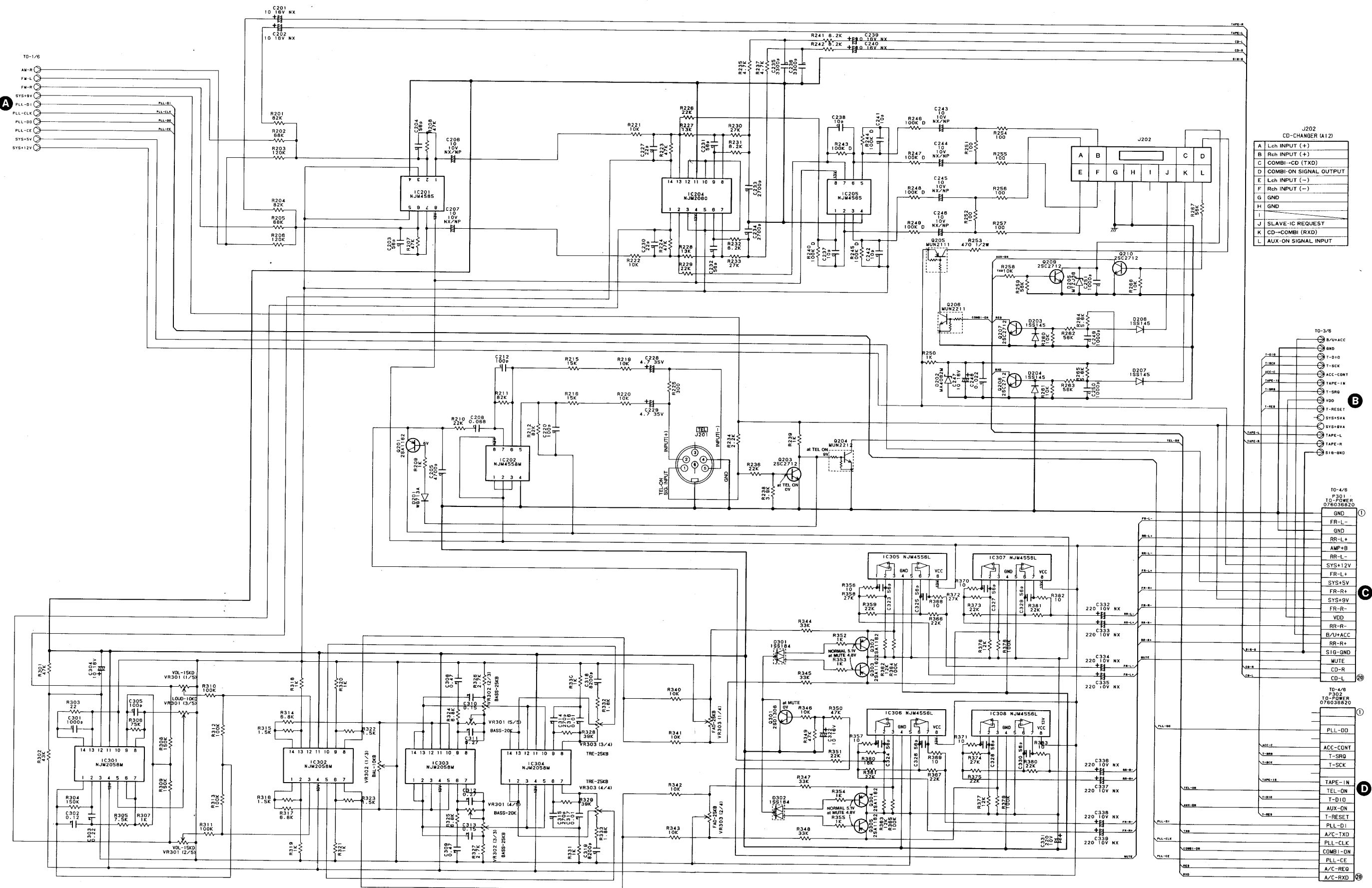
CIRCUIT DIAGRAM: 1/6

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■CIRCUIT DIAGRAM: 2/6

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J202
CD-CHANGER (A12)

A	Leh INPUT (+)
B	Reh INPUT (+)
C	COMBI-CD (TXD)
D	COMBI-ON SIGNAL OUTPUT
E	Leh INPUT (-)
F	Reh INPUT (-)
G	GND
H	GND
I	GND
J	SLAVE-IC REQUEST
K	CD-COMBI (RXD)
L	AUX-ON SIGNAL INPUT

TO-3/6

1-BLK	B/U+VACC
1-BLK	GND
1-BLK	T-DIO
1-BLK	T-SCK
1-BLK	ACC-CONT
1-BLK	TAPE-IN
1-BLK	T-SRQ
1-BLK	T-RESET
1-BLK	STP+VVA
1-BLK	STP+VVA
1-BLK	TAPE-L
1-BLK	TAPE-R
1-BLK	SIG-GND

TO-4/6
P301
IO-POWER
076038820

1	GND
2	FR-L-
3	GND
4	RR-L+
5	AMP+B
6	RR-L-
7	STP+12V
8	FR-L+
9	STP+5V
10	FR-R+
11	STP+9V
12	FR-R-
13	VDD
14	RR-R-
15	B/U+ACC
16	RR-R+
17	SIG-GND
18	MUTE
19	CD-R
20	CD-L

TO-4/6
P302
IO-POWER
076038820

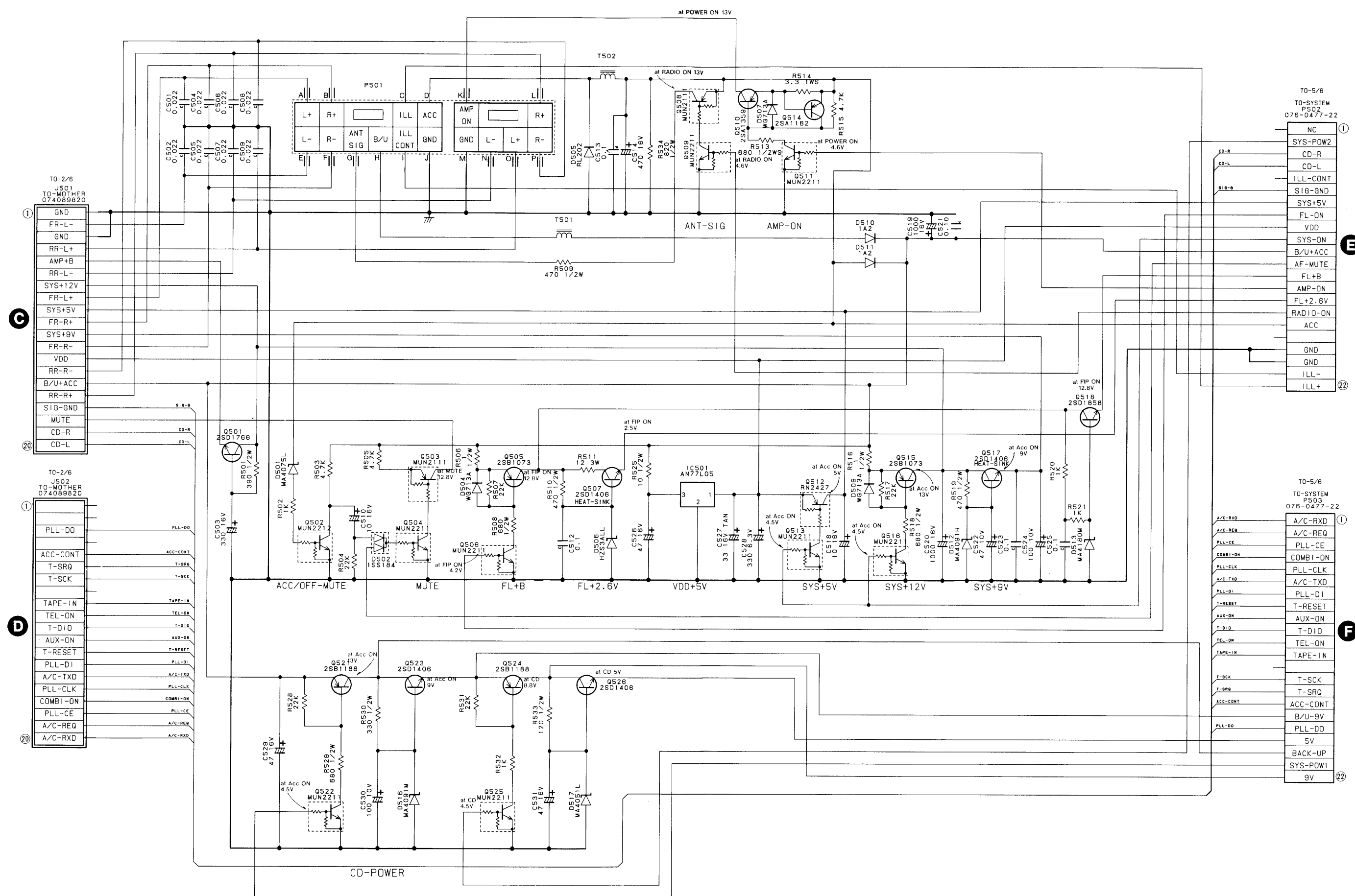
1	PLL-DD
2	ACC-CONT
3	T-SRQ
4	T-SCK
5	TAPE-IN
6	TEL-ON
7	T-DIO
8	AUX-ON
9	T-RESET
10	PLL-DI
11	A/C-TXD
12	PLL-CLK
13	COMBI-ON
14	PLL-CE
15	A/C-REQ
16	A/C-RXD

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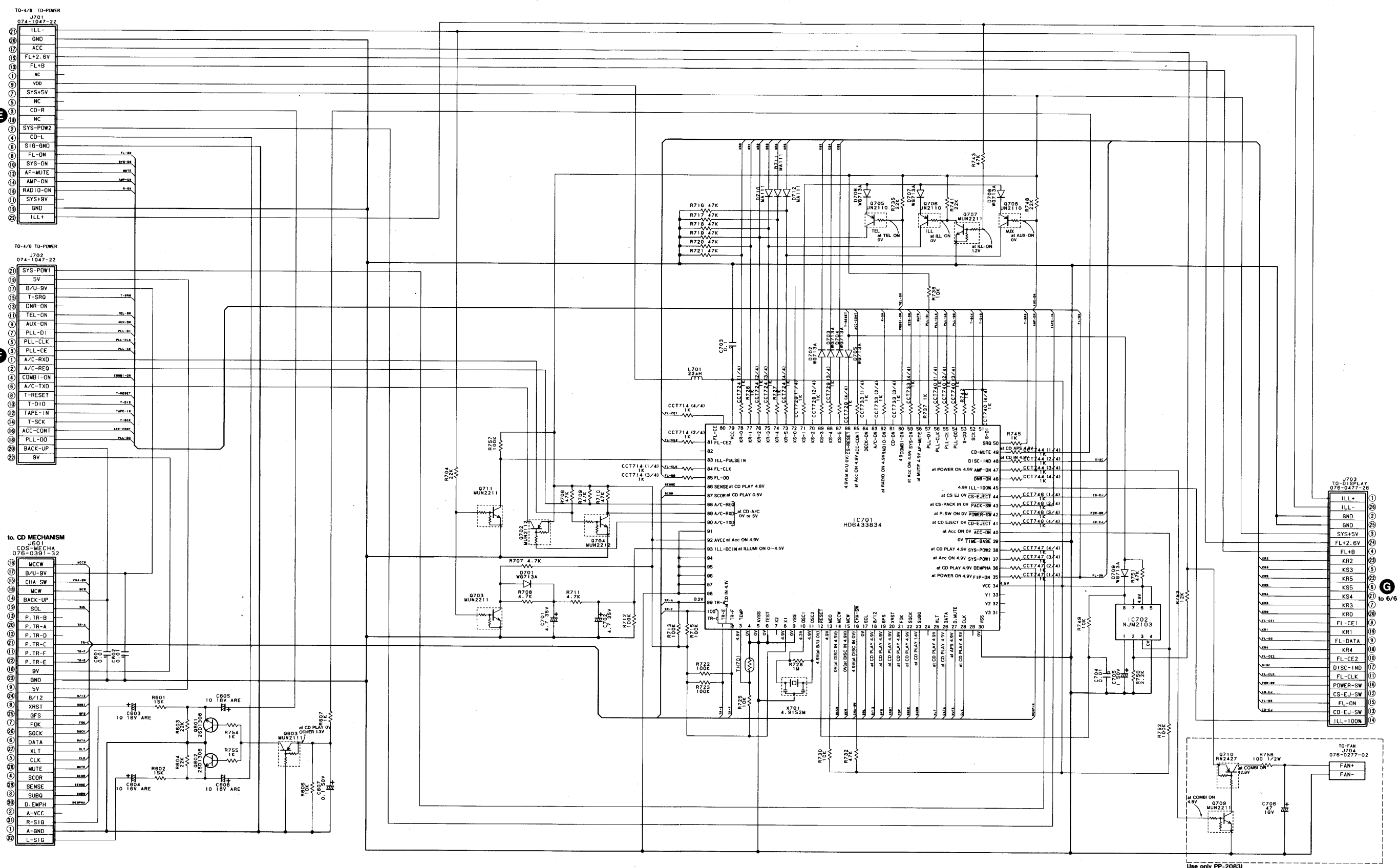


CIRCUIT DIAGRAM: 4/6

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A

B

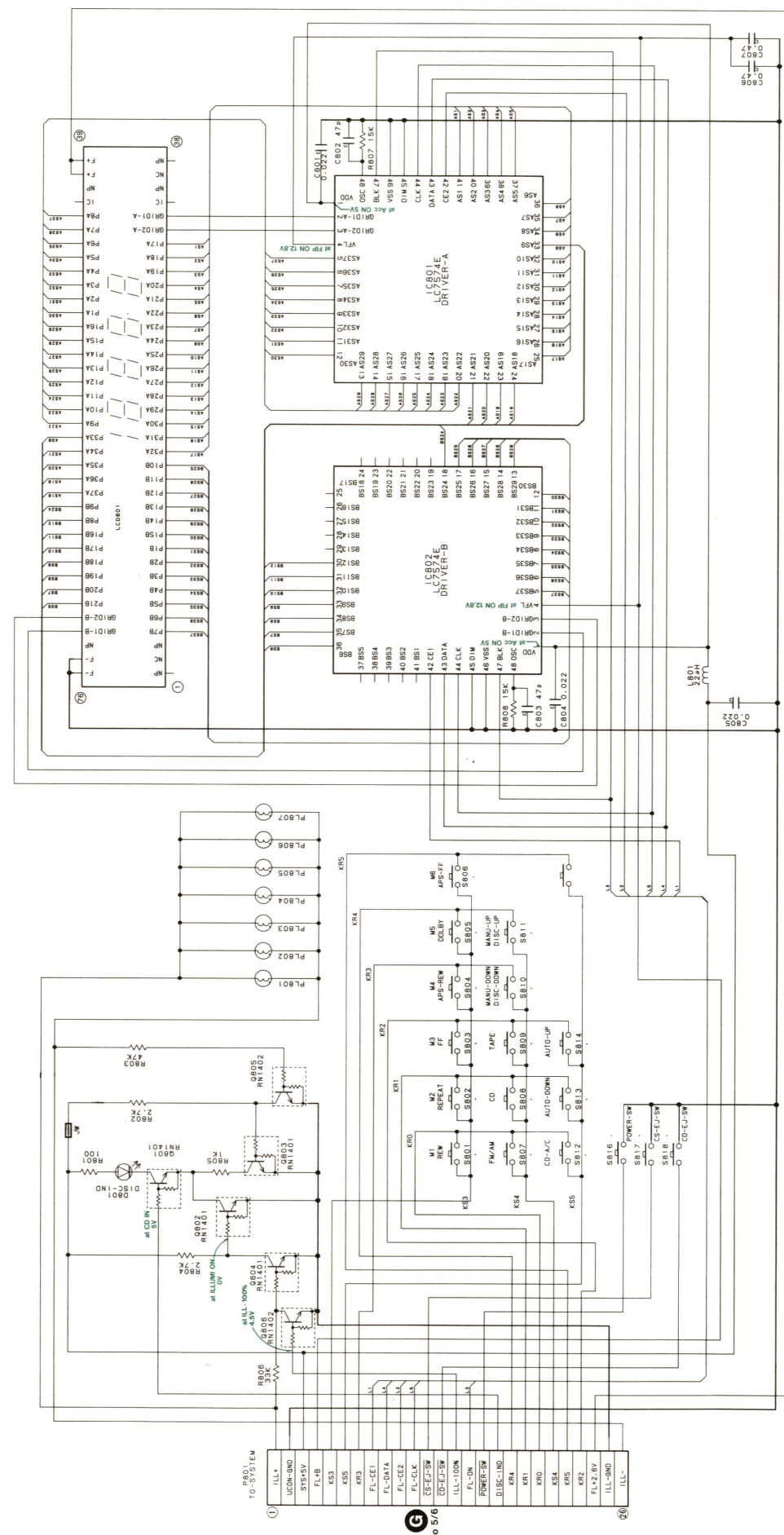
C

D

E

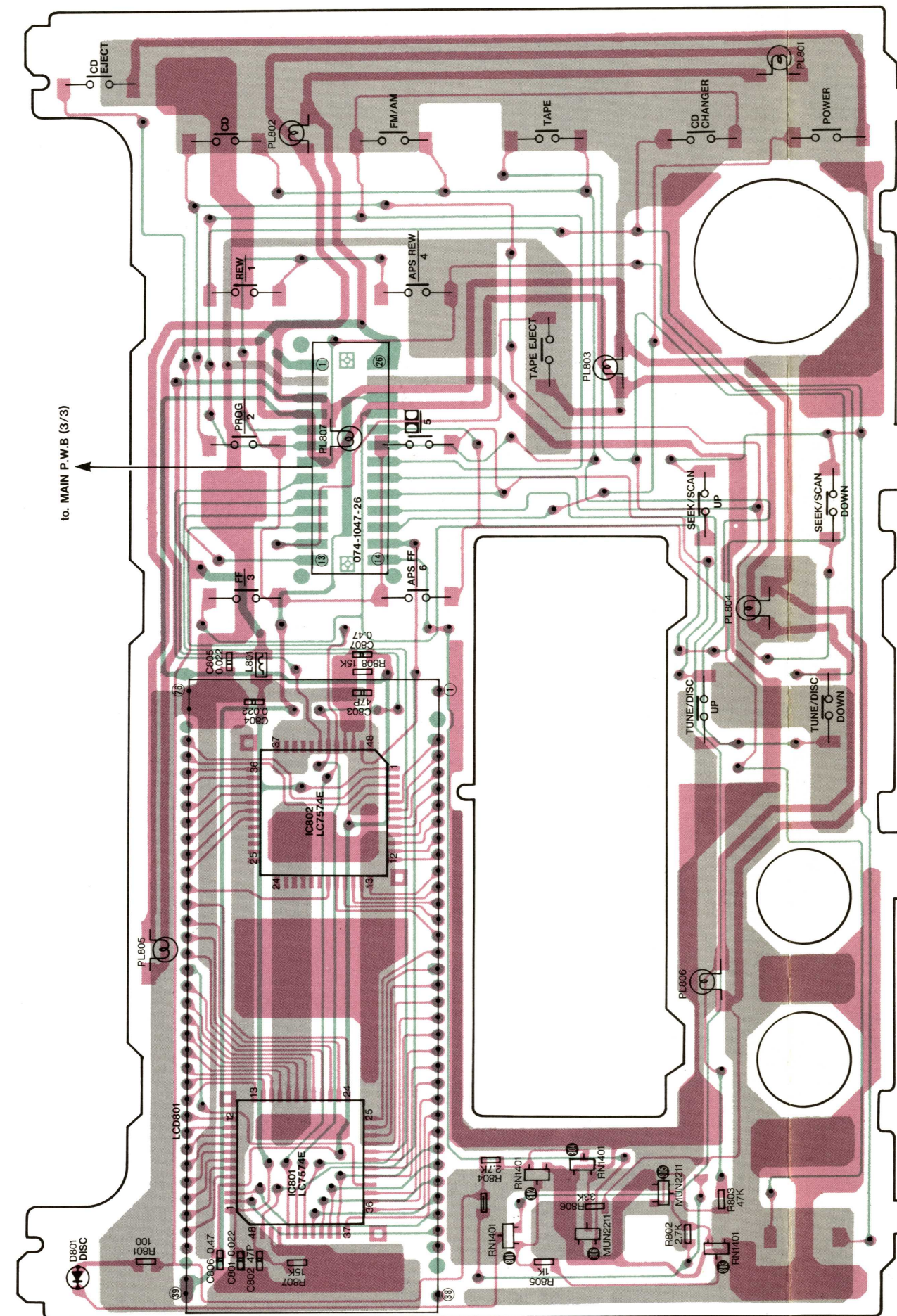
CIRCUIT DIAGRAM: 6/6

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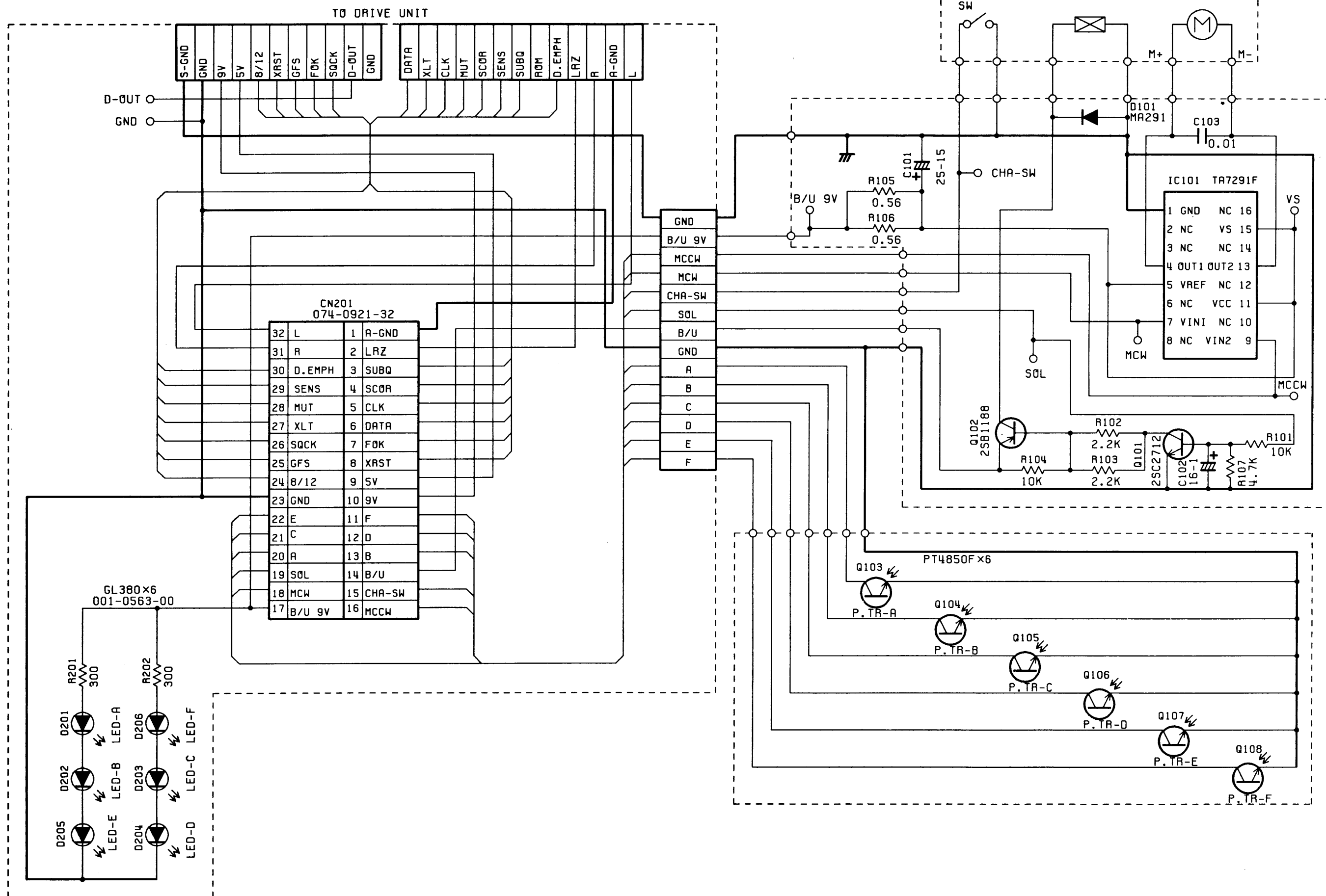
PRINTED WIRING BOARD:

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CIRCUIT DIAGRAM: 1/2

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